



**UNIVERSITY OF  
KWAZULU-NATAL**

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**INYUVESI  
YAKWAZULU-NATALI**

**EVALUATING THE EFFECTIVENESS OF SUPPLY  
CHAIN MANAGEMENT STRATEGY IN A TVET  
COLLEGE: A CASE STUDY OF ELANGENI TECHNICAL  
AND VOCATIONAL EDUCATION AND TRAINING  
COLLEGE IN DURBAN**

**By**

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**School of Management, Information Technology and Governance,**

**College of Law and Management Studies**

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## DECLARATION

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I, Sithembiso Ephraim Mabanga, student number 204517164 declare that:

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- (ii) This dissertation has not been submitted for any degree or examination at any other university.
- (iii) This dissertation does not contain other person's data, pictures, graphs or other information, unless specifically acknowledged as being sourced from other persons.
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Date:

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This is a dedication to the memory of my late elder brother: Sebenzelaphi Eric Mabanga, who always instilled in me the appreciation and importance of education and discipline from a young age.

## **ABSTRACT**

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This study was conducted to evaluate the effectiveness of the supply chain management (SCM) strategy adopted by Elangeni TVET College in Durban, KwaZulu-Natal Province, in the Republic of South Africa as their procurement tool. Purposive sampling was used through which sixty (60) respondents were identified within the college. This study collected quantitative data using a questionnaire; the findings are presented using tables and graphs. The study employed a survey method to elicit the views of the users and beneficiaries of the supply chain management processes on the effectiveness of the implemented supply management strategy at Elangeni TVET College. Fundamentally, institutions such as Elangeni TVET College by virtue of being the closest to the people play an important role of providing skills through education that aimed at improving lives and standard of living of the young people in the communities where TVET colleges are based. The findings of the study revealed that (i) the beneficiaries of the SCM processes at Elangeni TVET College are satisfied with the SCM strategy adopted by the college as a procurement tool (ii) the stakeholders in the value chain have good experiences of the SCM processes of the college, and (iii) the college has sufficient capacity and resources it needs to support the college to achieve its organizational goals and objectives of delivering quality teaching and learning. The study concluded that Elangeni TVET College has in place functioning SCM processes that play an integral role in assisting the college to deliver services to the students.

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## LISTS OF ACRONYMS AND ABBREVIATIONS

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<b>BAC</b>	Bids Adjudication Committee
<b>BSC</b>	Bids Specification Committee
<b>BEC</b>	Bids Evaluation Committee
<b>BBB-EE</b>	Broad Base Black Economic Empowerment
<b>CSD</b>	Central Supplier Database
<b>DHET</b>	Department of Higher Education and Training
<b>FET</b>	Further Education and Training
<b>HDI</b> s	Historical Disadvantaged Individuals
<b>IT</b>	Information Technology
<b>NT</b>	National Treasury
<b>PFMA</b>	Public Finance Management Act
<b>PPPFA</b>	Preferential Procurement Policy Framework Act
<b>SMME</b> s	Small, Medium and Micro Enterprises
<b>SCM</b>	Supply Chain Management
<b>SPSS</b>	Statistical Package for Social Sciences
<b>TVET</b>	Technical and Vocation Education and Training

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## **CHAPTER ONE: OVERVIEW OF THE STUDY**

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### **1.1 Introduction**

The objective of this research is to evaluate the effectiveness of the Supply Chain Management (SCM) strategy implemented by Elangeni Technical Vocational Education and Training (TVET) College. Equally, the goal of this chapter is to give an overview of the study. This chapter begins by giving the background of the study, a primary literature review, the research problem, the research objectives, the research questions and sub-questions. The chapter briefly discusses the legal framework, the supply chain management system and the role players within the supply chain management environment. It also touches on the research design and methodology applied by the researcher. The conclusion of this chapter presents a full summary and the layout of the dissertation.

After the 2009 national government election in South Africa, the new administration decided to divide the then existing Education department into two, namely, Department of Basic education and Department of Higher Education and Training (DHET). TVET Colleges became part of the DHET (DHET, 2015).

Prior to 2009 TVET colleges were known as Further Education and Training (FET) colleges. The name was changed to Technical and Vocational Education and Training colleges when the FET Act 16 of 2006 was amended by Act 3 of 2012 (RSA, 2006). There are fifty public TVET colleges in South Africa and there are nine in the KwaZulu-Natal Province. The core mandate of all TVET colleges is teaching and learning with an emphasis on addressing the skills shortage in the country in the various fields, for example, artisan's development. The implementation of government policies across all TVET colleges is the work in progress. SCM is one of the policies being implemented at all TVET colleges (DHET, 2015)

### **1.2 Background of the study**

The global discourse on good governance is underpinned by a call for government's caution in fighting the spread of corruption and fraud and in promoting integrity driven forms of administration (Bac and Erkan, 2011: 382). Similarly, state institutions such as

public TVET colleges are expected to serve as exemplars to promote and maintain a high standard of professional ethics (Mkhize, 2004:16). Achieving this standard requires a strong ethics and infrastructure supported by enabling policies (Mkhize, 2004:17).

This suggests that, prior to 1994, the apartheid government used a system of procurement which was not inclusive, based on discrimination on race and which was mainly rule driven and focused only on lifting the standard of living of the white minority argues (Ambe, 2012:149). As a result, this tendering system deprived the majority, mainly black people, of the opportunity to benefit and develop from government procurement policies (Van Zyl, 2006).

However, immediately after taking office in 1994, the African National Congress (ANC) led government-initiated services of budgetary and financial reforms in its attempt to modernise the management of Public Sector to make it friendlier and sensitive to meeting the needs of the communities it serves (Gansler and Kornberg, 2004: 8). Consequently, cabinet resolved that the concept of SCM be introduced within the Public Sector to address the inefficiencies in the apartheid government's method of procurement, contract management, inventory/asset and obsolescence planning as stated in the (National Treasury, 2015:10).

In the same way, during December 2003, SCM was introduced to National and Provincial Public entities (Ismay, 2008:65). The objective being to transform government out-dated procurement and provisioning practices into an integrated SCM function, to introduce a systematic approach for the appointment of consultants to create a common understanding and interpretation of the preferential procurement policy framework Act of 2003, and promote the consistent application of best practices through Government's Supply Chain (Handfield, Monczka, Giuinipero and Patterson, 2009).

Ambe (2009:428) argues that although a number of improvements have been introduced, the procurement system in this country is still confronted by the number of serious challenges in which fraud and corruption remain outstanding challenges. It is against this background that this research study evaluated the effectiveness of the Governments SCM processes implemented at Elangeni TVET College as its tool to procure goods and services for the institution.

Therefore, this research will primarily look at the shortcomings in the SCM process that has already been implemented by Elangeni Technical Vocational and Training institution. As a result, this research will identify deficiencies in the existing SCM process implementation that will form the basis for improving practices to comply with international best practices that will not only advantage Elangeni TVET College as the institution but ultimately the beneficiaries of the goods and services procured through SCM processes.

### **1.3 Preliminary literature review**

Mensah and Tou (2013:123) state that, purchasing function is an important part of doing business in today's competitive environment and because of this, the purchasing function has now moved from product centred to a performance centred and this trend has called for the process to be evaluated in order to achieve the performance centeredness in the public sector.

SCM as a concept is contested, many scholars have tried to come up with an authentic view of the concept but this study integrates common argument from different authors to define SCM. According to Tukamuhabwa (2012:34), SCM is one of the key mechanisms enabling the government to implement policy. The negative effects of inefficient in the public sector SCM, particularly in the procurement phase of the chain, are well documented (Tukamuhabwa, 2012:34).

Ambe and Maleka (2016:658) further describe SCM as the planning and management tool that involve all activities of sourcing and procurement, conversion, and all other logistics. This also includes coordination and collaboration with channel partners, which can be suppliers, intermediaries, thirds party service providers, and customers. For this reason, this focus on activities and relationships implies logistics, marketing, purchasing or supply and production operations that are involved in the SCM (Ambe and Maleka, 2016:658).

Successful implementation of SCM is seen as closely dependent upon the need for breaking down barriers not only between internal departments and business processes but also across companies within the whole supply chain (Ngotho and Kagiri, 2016:38). Its success is also associated with the challenging development of a new culture based on

empowerment on-going shared learning and continuous improvement (Ngotho and Kagiri, 2016:47). According to Mwirigi and Were (2014:148), strategic partnerships with suppliers allow organizations to work more effectively with a few important suppliers who are willing to share responsibility for the success of the products.

### **1.3.1 Technical Vocational and Education and Training Colleges in South Africa**

In May 2001, the then Minister of Education, Professor Kader Asmal, launched the merger process that was to combine 152 technical colleges into 50 merged FET Institutions. The purpose of this process was to ensure that 50 institutions became established as viable FET colleges that would be able to fulfil the FET mandate as spelt out in the Education White Paper 4, which was a programme for the Transformation of FET system in South Africa (Nzimande, 2015:22). The main aim of the merger was to meet the developmental needs of the South African communities and the labour market (Nzimande, 2015:5). In KwaZulu-Natal, there were twenty-four (24) Technical colleges who were merged and became nine FET colleges.

After the 2009 national government election in South Africa, the new administration decided to divide the then existing Education department into two namely, Department of Basic education and DHET. However, TVET Colleges became part of the DHET in an effort to align the former FET institutions with international standards (DHET, 2015:6)

### **1.3.2 The Legislative and policy mandates of TVET Colleges**

It is stated in the Elangeni TVET College Strategic Plan (2017:10) that the Constitution of the Republic of South Africa (Section 29(1)-(4) provides for the right of basic and further education to everyone in the official language of their choice; provided equity, redress and practicability are taken into account. In addition, the Continuing Education and Training (CET) Colleges Act (No 16 of 2006) provides for the regulation of continuing and FET through the establishment, governance and funding of public TVET colleges and the promotion of quality in continuing and FET.

### **1.3.3 Elangeni TVET College**

Elangeni TVET College is at the forefront of skills development in the eThekweni Metro and Ndwedwe Municipal area. The prime target of the college is to alleviate poverty

through skills development thus allowing surrounding communities to be attractive in the labour market. Elangeni TVET College administration is located in the Pinetown and consists of nine sites, including its Central office and it is in two municipalities (Elangeni Strategic Plan, 2017:11). The college has nine sites; eight of them are within the Ethekewini Metro and one in the Ilembe district (Elangeni TVET College Strategic Plan, 2017:11).

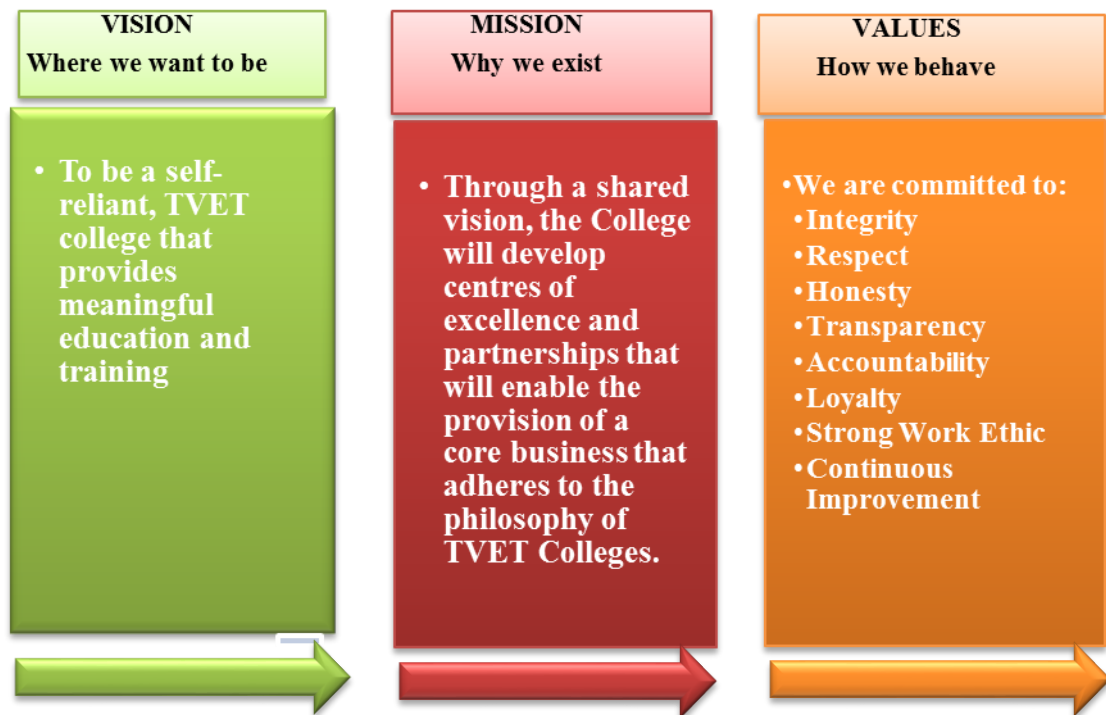
#### **1.3.4 Elangeni TVET College vision and objectives**

The Elangeni TVET College vision is to be a self-reliant, TVET college that provides meaningful education and training to the youth of Durban and surrounding areas (Elangeni Strategic Plan, 2017:11). Through a shared vision, the Elangeni TVET College strive to develop centres of excellence and partnerships that will enable the provision of a core business that adheres to the philosophy of TVET Colleges (Elangeni Strategic Plan, 2017:11).

The Elangeni TVET College has also set itself five strategic objectives to achieve and are listed below (Elangeni TVET College Strategic Plan, 2017:12).

- The first objective is to provide quality technical and vocational education and training services and increase academic achievement and success of students.
- The second objective is to acquire enough infrastructure and systems in place to increase access and give the best services to students.
- The third objective is to develop partnerships and maintain good stakeholder relations to maximize the number of students who are ready to enter the working environment or further higher learning opportunities.
- The forth objective is to ensure continuous business excellence in terms of good corporate governance and effectual management of all college resources as well as information and data reporting.
- The fifth and the last one objective is to monitor and evaluate all college processes in terms of the TVET College Monitoring and Evaluation Framework and report quarterly on college performance in this regard.

The following diagram illustrates the vision, mission and values of Elangeni TVET College:



**Figure 1-1: Elangeni TVET College 2017**

#### **1.4 Research problem**

Section 1.2 discussed the background of the study while section 1.3 provided a preliminary literature review. Sections 1.3.1 to 1.3.4 of the preliminary literature review reveal the background out of which this research problem arises. Youth unemployment remains a challenge in South Africa. TVET colleges are expected to build capacity of youth by meeting certain goals and objectives.

Hence, effective SCM is critical in the attainment of the mission statement, vision and objectives of the Elangeni TVET College. The SCM department of the Elangeni TVET College must help to achieve its strategic goals and objectives. Unfortunately the lack of skilled SCM officials, in-effective SCM committees, and the non-participation of the key stakeholders in the SCM processes call into question the service delivery to the beneficiaries of the SCM processes.

If these problems are not attended to, the vision and the mission of Elangeni TVET College will not be realised. There is a neglect of SCM research in the TVET sector in general and our understandings of the SCM in the TVET sector are speculative. It is

against this background that the researcher aims to evaluate the effectiveness of the SCM strategy in the TVET sector using Elangeni TVET College as a case study.

### **1.5 Research objectives**

The objectives of the study were to:

- Evaluate the effectiveness of SCM strategy within at Elangeni TVET College.
- Understand the perceptions of the internal Elangeni TVET College stakeholders of the value chain regarding the SCM strategy.
- Determine the adequacy of staff and other resources that are required to deliver goods and services to its customers at Elangeni TVET College SCM department.

### **1.6 Research questions**

- How does the SCM strategy assist the Elangeni TVET College to deliver on its core mandate of teaching and learning?
- How do stakeholders in the value chain experience SCM strategy at Elangeni TVET College?
- To what extent is the college SCM department capacitated in terms of staffing and other resources that are needed for the college to deliver on its customers?

### **1.7 Rationale of the study**

The South African National Planning Commission (2011: 113) is concerning with youth development and employment. The NDP has set enrolment targets to increase radically youth participation in TVET Colleges for them to be skilled and be ready for the employment market. The SCM processes are central to enabling the teaching and learning function of TVET colleges. The rationale for this study is based, in part, on the NDP. To promote the NDP, this research study evaluated the implementation of the SCM strategy and processes at Elangeni TVET College. Another rationale is to assist management and staff of the college to understand better the processes of the SCM. Understanding the process of the SCM will assist in preventing the delays in delivery of goods and services to the end users. The study will also help other public TVET colleges to have an in-depth

understanding of the SCM processes and to avoid delays in delivery of goods and services to the intended beneficiaries of SCM.

In addition, the rationale for this study is to identify what supports or hinders the effectiveness of the SCM processes at the college. Thus, the study and its recommendations will be of an enormous advantage to Elangeni TVET College and other sister colleges within the province of KwaZulu-Natal, in its pursuit of producing the maximum possible educational outputs through efficient, economic and effective use of the available resources. This in turn, will allow TVET colleges to play a useful role in accomplishing the vision of the NDP to move South Africa forward through youth development in a continental and global context.

## **1.8 Research Design and Methods**

### **1.8.1 Research Design and Strategy**

This study has used a quantitative research method; in the collection of the data, primary data collection methods was used. The researcher distributed questionnaires, via the quantitative approach because the researcher wanted to get statistical data on feelings and emotions of the participants towards the SCM strategy (Rajasekar, Philominathan, and Chinnathambi *et al.*, 2013:214). The quantitative approach is meant to give details of numeric evidence that support application of the phenomena to the general population.

### **1.8.2 Data Collection Methods and Analysis**

A questionnaire was prepared and distributed to the research participants and administered personally by the researcher at Elangeni TVET College. Consequently, this was done with the aim to obtain employee perceptions on the effectiveness of SCM strategy at Elangeni TVET College. The data collected from this method was taken into consideration. The programme used for analysis was Statistical Package for the Social Sciences (SPSS).

For the study to adhere to the rules of the ethics; permission was requested and granted by Elangeni TVET College's principal. However, ethical clearance was obtained from the Ethical Clearance Committee of the University of KwaZulu-Natal. In addition, prior to completion of the survey information by respondents and conducting of interviews of

informants, the researcher made sure that the participants were informed about their rights, privacy, confidentiality and anonymity of their responses. Subsequent to that, if any participants felt that their rights were being violated or if they were uncomfortable, they could withdraw at any given time.

The aim of data analysis is to transform information into an answer to the original research question careful consideration of data analysis strategies will ensure that the design is coherent as the researcher matches the analysis to a particular type of data (Durrheim, 2007:193). Once data has been collected, the questionnaire will then be coded and edited.

It will then be interpreted using statistical software. Statistical software will be used to analyse data because it uses spread sheet format which is an excellent tool for importing and exporting data and results. A detailed description of the methods employed for this study is found in Chapter Three.

## **1.9 Structure of the Dissertation**

The first chapter of this dissertation highlights the background of the effectiveness of SCM Strategy in a TVET College, Elangeni Technical and Vocational Education and Training College in Durban. The research questions and the objectives of the study are clearly outlined and the method of investigation presented.

The second chapter focuses on the various literature reviews based on the different sources related to this particular field of SCM. However, the chapter also explores the literature review, theories of SCM and, legislative framework guiding the SCM, implementation of the Supply Chain strategies.

This third chapter review the research design and methods, thus looking at the strategy, sampling, data analysis, validity and reliability, trustworthiness and credibility, limitations of the study and the ethical considerations.

In Chapter four, the results of the study were analysed and the findings were presented and interpreted. As a result, the conclusion arising from the study on the effectiveness of SCM Strategy in a TVET College Elangeni Technical and Vocational Education and Training College in Durban is presented unequivocally The-chapter also provides

recommendations as a guide for future policymakers. Table 1.1 shows the outline of the dissertation.

**Table 1-1: Dissertation structure**

Chapters	Title
<b>One</b>	Introduction
<b>Two</b>	Literature review
<b>Three</b>	Research methodology
<b>Four</b>	Presentation and analysis of results
<b>Five</b>	Summary, conclusions and recommendations

### **1.10 Chapter summary**

This chapter highlighted the background of the effectiveness of SCM Strategy in a TVET College, Elangeni Technical and Vocational Education and Training College in Durban. The problem statement, objectives of the study, the research questions and research design and methods were explained. The introduction also focuses on the structure of the dissertation and gives an overview of the Elangeni TVET College SCM processes. In the second chapter, the study will review existing literature on the SCM and also show how the theoretical framework emanates from the study of SCM.

## **CHAPTER TWO: LITERATURE REVIEW**

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### **2.1 Introduction**

This chapter reviews current literature related to SCM. The chapter begins by defining SCM in general and thereafter the discussion is on the SCM in the South African Public context. This chapter also touches on the purpose of SCM and its elements and, the legislation that guides the implementation of SCM. The chapter then discusses theories underpinning the study and thereafter, offers a conclusion.

### **2.2 Conceptualizing Supply Chain Management**

#### **2.2.1 Defining Supply Chain Management**

It is generally a difficult task in many disciplines to give a precise definition of concepts. This is due to a number of reasons which usually include the evolution of knowledge which leads to technological advancements. There are various definitions of SCM. Some definitions are more general than others. Whilst some definitions of the SCM concept are more theoretically inclined, others are more practical in orientation. Muhammad (2013:19); Zigiari (2000:5); Zinn and Goldsby (2014:20) and Swink, Melnyk, Cooper and Hartley (2010:65) tend to provide general definitions of SCM.

According to Muhammad (2013:27), supply chain in simplest terms means a system of organizations, people, activities, information, and resources involved in moving a product or service from supplier to customer. This means that in each and every organization it is unavoidable that there be a supply chain systems, though they may vary when compared to other organizations. However, they are always a must for the full functioning to such an organization (Muhammad 2013:7).

Zigiari (2000:5) further asserts that while this is the case there are many ways in which this is done and certain concepts have emerged so as to allow supply chain management to be what it is and to judge if it is actually evolving over the years and conforming to technological advancements and globalization. With the constant changes in the SCM regulations in South Africa, it demands that the SCM department must have the skilled SCM practitioners to implement those changes, which are aimed at improving the service delivery to the communities. According to Zinn and Goldsby (2014:20), SCM

encompasses the planning and management of all activities involved in sourcing and procurement, conversion, and all logistics management activities. Swink, Melnyk, Cooper and Hartley (2010:65) define SCM as a design and execution of relationships and flows that connect the parties and processes across a supply chain.

Zigiaris (2000:12); (Naslund and Williamson 2010:5); and Handfield (2011:15) seem to be more theoretical when describing and explaining SCM. For example, Zigiaris (2000:12) describes SCM as a set of approaches utilized efficiently to integrate suppliers, manufacturers, warehouses and stores so that the merchandise is produced and distributed in the right quantities to the locations and at the right time, in order to minimize cost while satisfying service level requirements. Importantly, the SCM also includes coordination and collaboration with channel partners, which can be suppliers, intermediaries, third party service providers, and customers. In principle, SCM integrate supply and demand management within and across companies. (Naslund and Williamson 2010:5). To Handfield (2011:15) “The concept of SCM is based on two core ideas. The first is that practically every product that reaches an end user represents the cumulative effort of multiple organizations”. These organizations are referred to collectively as the supply chain. The second idea is that while supply chains have existed for a long time, most organizations have only paid attention to what was happening within their “four walls”. Few businesses understood, much less managed, the entire chain of activities that ultimately delivered products to the final customer. Recognising that SCM extends beyond national borders, the Global Supply Chain Forum gives a similar meaning or definition of SCM as they say that SCM “is the integration of key business processes from end user through original suppliers that provides products, services and information that add value for customers and other stakeholders” (Naslund and Williamson 2010:13)

Still other scholars view the SCM concept from a practical perspective (Baily, Farmer, Crocker, Jessop and Jones, 2008; Kotler and Armstrong, 2010:97; Ambe and Badenhorst-Weiss, 2011:74). For instance, Baily, Farmer, Crocker, Jessop and Jones (2008) define SCM as the coordinated flow of funds, information, materials and services from origin through suppliers into and through the organization and ultimately, to the consumer and it is done in such a manner that value-added is maximized and the cost is minimized. SCM is an upstream and downstream relationship with suppliers and customers to deliver

superior customer value at a less cost to the supply chain as a whole (Christopher, 2005). Similarly, Kotler and Armstrong (2010:97) define SCM as managing upstream and downstream value-added flows of materials, final goods and related information among suppliers, the company resellers, and customers. Ambe and Badenhorst-Weiss (2011:74) argue that SCM is a procurement tool that, strategically integrates the whole procurement process. Thus, SCM is thought to be narrow in a functional sense, an element of procurement rather than spanning multiple functional areas. The core processes in the public sector are essentially the same as for the private sector. These are to: establish direction; acquire resources; provide capability; and execute the mission. While Government establishes the policy and program outcomes that are to be achieved in exchange for the financial resources, management translates the vision and allocates the capabilities to achieve the delivery of agreed outputs.

It is important to note again that definitions will always evolve over time to adapt to modernity. Therefore what SCM may always differ and this will therefore make it difficult to define one and for all the concept of SCM. However, for the purposes of this study, the above definition as offered by the Global Supply Chain Forum will be used.

Drawing on these definitions, SCM is process used by the active management of supply chain activities to give customers value for their money and achieve a sustainable advantage over their competition. Equally, it represent a conscious effort to develop and run supply chain in the most effective and efficient ways possible. Thus, everything from product development, sourcing, production and logistics, as well as the information systems needed to coordinate these activities are covered in the supply chain. Therefore, both physical and information flows link the organisation that make up the supply chain. As a result, transformation, movement and storage of goods and material are involved in the physical flows.

Therefore, this is the most visible piece of the supply chain. It suggests that, information flows allow different supply chain partners to coordinate their long term goals, and manage the day-to-day process of goods and material through the supply chain. Hugo and Badenhorst-Weiss (2016:5) argues that SCM is the systems approach to managing the whole flow of information, materials, and services from raw materials suppliers through factories and warehouse to the end user customer. SCM includes all activities associated

with the flow and transformation of goods from the raw material stage, through to the end user, as well as the associated information flows (Hugo and Badenhorst-Weiss, 2016:5).

### **2.2.2 Supply Chain Management Objectives**

The objectives and goals of the SCM are used to reduce risks and uncertainty in the SCM, thereby positively affect the inventory levels, processes, cycle time, and eventually end customer service levels, argues Charan, Shankar and Baisya (2008:516).

There are also other objectives of SCM as mentioned by Chandra and Grabis (2007:37).

- Improving supply chain delivery reliability,
- Increasing supply chain responsive,
- Increasing supply chain flexibility,
- Optimising supply chain costs,
- Improving supply chain asset management efficiency,

Accordingly, the public procurement policy objectives include the value for money, integrity, accountability to the public, ensuring that markets are open to competition and trade partners, support of economic and social objectives, and efficiency (Quinot and Arrowsmith, 2013:102). It is therefore important for organizations to practise best SCM processes.

The intention of the government to implement SCM policy across all departments was to change the management of the public sector in order to make it more people-friendly and sensitive to meeting the needs of the communities it serves.

## **2.3 SCM in the South African public sector concept**

### **2.3.1 Public Procurement**

It can be concluded that, public procurement is a process in which the government acquires goods and services to fulfil its public functions. Therefore, the process of looking at the needs, supplier and the maintenance of contract are all included in the procurement function (Quinot and Arrowsmith, 2013:1). Public procurement is where the public sector acquires goods and services from providers in the local and international markets, subject to the general principles of fairness, equitability, transparency, competitiveness and cost-

effectiveness (Ambe and Badenhorst-Weiss, 2012:256-257). In South Africa, the Constitution mandates the public procurement must be fair, equitable, transparent, competitive and cost-effective (Constitution of RSA of 1996, Section 217(1). This suggests that, SCM is one of the key mechanisms helping the government to put in place the relevant policies. Suppliers charge organs of state excessive prices; goods and services contracted for and deliveries are of poor quality and unreliable; and there is corruption and waste (National Treasury, 2015:3).

The supply chain process is based on the principles of ensuring value for money, open and effective competition, ethics and fair practices, accountability and reporting, and equity (Ambe and Maleka, 2016:659). Ensuring these values will achieve the ultimate goal of uniformity in procurement processes, good governance and economic development (Ambe and Maleka, 2016:663).

The private sector, by contrast, is inclined to invest astutely in SCM in order to maximize shareholder's value and ensure that its products and services match client's needs (National Treasury, 2015:1). In fact, the value of SCM to quality service delivery, value creation, socio economic transformation and fiscal prudence is starting to be valued by the South African Government. Given the above, the National Treasury now has the office of the chief procurement which shows the government's commitment to use the SCM as a tool to provide the best service, at the right place and time (National Treasury, 2015).

Shortly after the 1994 national government elections, the new democratic government initiated budgetary and financial reforms. As a result of these initiatives, a significant progress has been made in respect of the implementation of these reforms (National Treasury, 2015:11). One of the basic principles of such reforms is that managers are given the opportunity to manage their departments within a framework that fulfils the constitutional requirements of transparency and accountability as the old Treasury instructions were elusive, and accountability was undermined, departments then were required to obtain approval from Treasury, for example, to write off minor debts (National Treasury, 2015)

In 1995, it was agreed that public procurement in Government could be used as a tool to give effect to various government goals. Since the existing financial-related legislation

did not allow for a procurement reform process, a strategy to reach these objectives commenced (National Treasury, 2015).

A Ten Point Plan to address interim strategies while enabling legislation was being enacted and adopted during November 1995. The main purpose of the plan was the involvement of small, medium and micro enterprise in the procurement system, with emphasis on the disadvantaged and marginalised sectors as providers of government goods and services and with the focus on employment creation (National Treasury, 2005). In April 1997, the Green Paper on Public Sector Procurement Reform in South Africa was published, issues addressed in the paper were the identification of partners in the process, the role of the various bidding committees and the identification of socio-economic objectives, which could be met and the implementation of preference system to achieve these socio-economic policy objectives (National Treasury, 2005).

Legislation that guides SCM in South Africa are the Public Finance Management Act 29 of 1999 during 1999, the Preferential Procurement Policy Framework Act 5 of 2000 and the subsequent Preferential Procurement Regulations in 2001. On 10 September 2003, the Cabinet approved the adoption of the “Policy to Guide Uniformity in Procurement Reform Processes in Government” which signals government direction towards implementation of SCM (National Treasury, 2015).

The policy strategy was intended to guide the uniform implementation of the government’s procurement reform initiatives and issuing of regulations in terms of Section 76 (4) of the Public Finance Management Act in respect of the Supply Chain Management Framework (SCMF). The SCMF was published in the Government Gazette number 25767 dated 5 December 2003. For the departments to secure the implementation of Supply Chain Management, National Treasury provided guidelines in February 2004 to departments through the Supply Chain Management guide for Accounting Officers/Authorities (National Treasury, 2015).

As a result, the South African Cabinet adopted a SCM policy in 2003 to replace out-dated procurement and provisioning practices. However, the objective was to implement a SCM function across all spheres of government, which would be an integral of financial management and would conform to international best practices (National Treasury,

2005a) This SCM policy framework aimed to serve the three main objectives. Firstly, it sought to promote uniformity and consistency in the application of SCM processes throughout government. Secondly, it aimed to facilitate the standardisation and uniform interpretation of government's preferential procurement legislation and policies. Lastly, it sought to complete the cycle of financial management reforms introduced by the Public Finance Management Act (PFMA), by devolving full responsibility and accountability for SCM related functions, to financial management functions, and accounting offices and authorities (National Treasury, 2005b)

## **2.4 Five pillars of good government procurement policy**

The SCM process is built upon the principles of ensuring value for money, open and effective competition, ethics and fair practices, accountability and reporting, and equity (South African Constitution, 1996). The following pillars of government procurement policy are briefly discussed below.

### **2.4.1 Fairness**

Procurement of goods and services in the government institution must be widely advertised and all prospective service providers should be conversant with the rules of the competition and they all should be afforded enough time to participate in the process (Bolton, 2007:48). This process would ensure that all service providers are subjected to the same rules of the process when they are conducting business with government, this will mean that there will be no service provider who would be favoured or prejudiced in the process and that will mean everyone who conducts business with government is treated equally (Bolton, 2007:48).

### **2.4.2 Equity**

The good governance pillar of equity enforces a duty on those tasked with working in the public procurement system to pay attention to procurement interventions that target SMMEs and the Historically Disadvantaged Individuals (HDIs). The adoption of the 10-Point Plan is one policy initiative by the government aimed at encouraging access of SMMEs and HDIs to government business opportunities. According to Bolton (2007) "the reference to equity in Section 217(1) of the Constitution can therefore be said to be aimed at addressing the inequalities and unfair discriminatory practices".

### **2.4.3 Transparency**

The good governance principle of transparency in public procurement is meant to conform to the public policy notion of checks and balances in the management of state resources by the chosen representative through the system of government bureaucracy. The aim of implementing a transparent public procurement system is for everyone to be afforded an opportunity to question any processes followed during the awarding of a government contract (Bolton, 2007:54).

### **2.4.4 Competition**

The principle of competition within the framework of public procurement can be defined as a process where more than one potential supplier or service provider is allowed to submit quotations or bid for the advertised work of government. This necessitates that departmental officials who are tasked with the procurement function conduct market analysis and develop a sourcing strategy that will allow for maximum competition.

This principle of competition in procurement in general, must allow a level of trust and partnership between the supplier and a buyer (Hugo, Badenhorst-Weiss and van Biljon, 2004:8). One of the advantages of competition is that an entity making use of competitive procedures is in a position to compare prices and quality, and can choose to use the service provider who is offering the best possible value (Bolton, 2006:41).

### **2.4.5 Cost-Effectiveness**

Bolton (2006:44), further argues that there is a thin line separating the requirements for competition and cost-effectiveness as the principles of good governance in public procurement, because both principles deal with the competence of the supplier or service provider to deliver as per the requirements of the quotation or bid.

## **2.5 Proposed implementation of SCM processes at the TVET Sector**

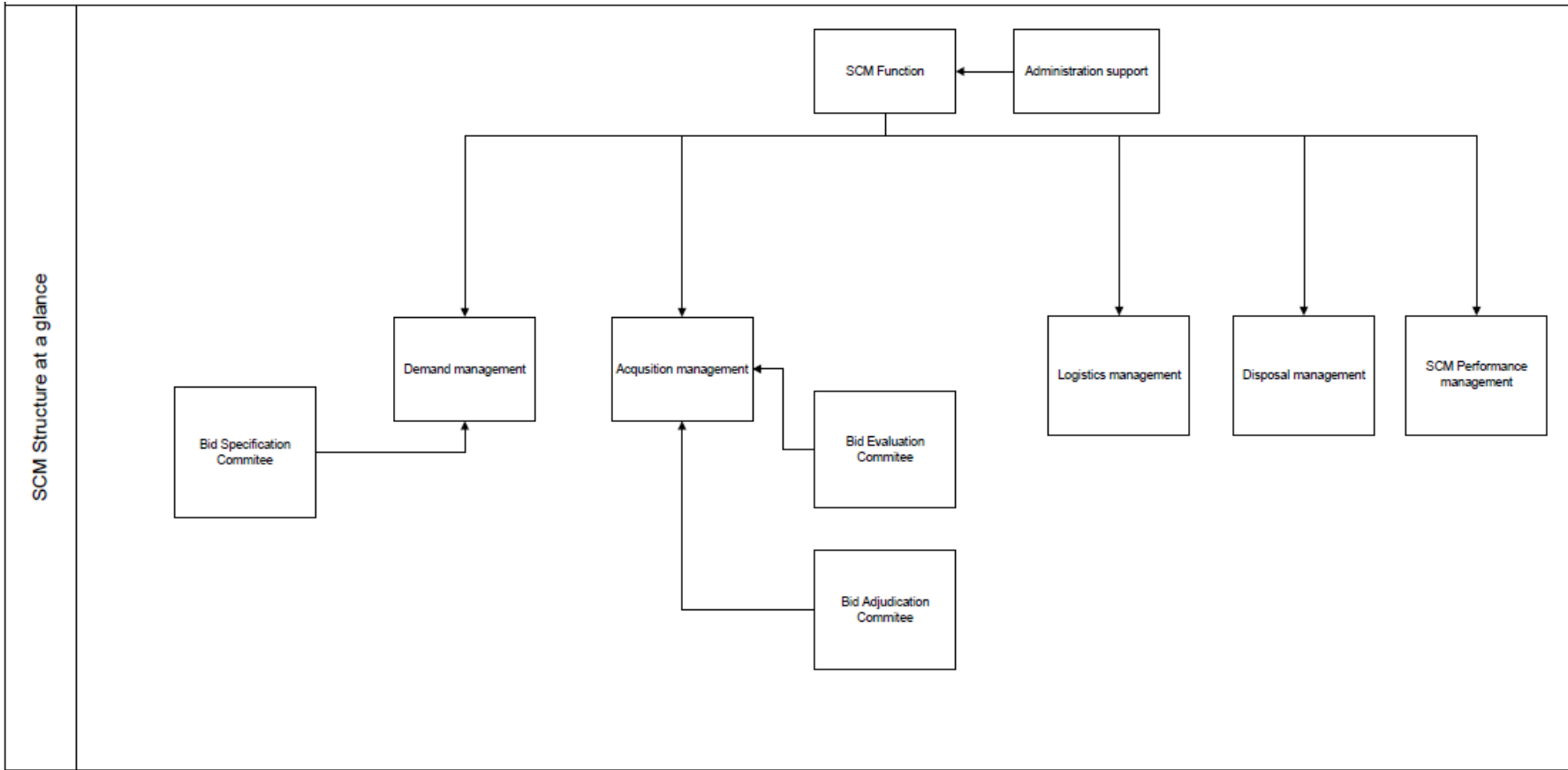
### **2.5.1 The strategic implementation plan of the SCM processes at Technical and Vocational Education and Training colleges**

Every organization regardless of its size, must have a strategy that will inform the policies the organization must have in order to realize the strategic goals that the organization has

set for itself. Hugo and Badenhorst-Weiss (2011:27) point out that strategic purchasing and supply planning is at top management level. It is for this reason that the (DHET) has directed all TVET colleges to implement the SCM policy which should be uniformed across all 50 public TVET colleges in South Africa (DHET, 2015).

Accordingly, DHET has developed the SCM policy that provides a framework that will equip the colleges to look for and appoint service providers, contractors and supplies that will supply them with the right goods and services at the right time, which are of high quality and the correct quantity, in the most cost-effective way (DHET, 2015).

Figure 2.1 outlines the SCM process flow that all TVET colleges should adopt when they to procure goods and services.



**Figure 2-1: SCM structure at glance. Source: (DHET: 2015)**

The objectives of the SCM are to achieve better value for money through evaluating and improving the current procurement practices and ensuring that customer needs are met by using effective sourcing strategies and Service Level Agreements. In addition, SCM aims to authenticate that the best practices are identified and put in place throughout the College (DHET, 2015).

As a result, management will need to source strategies, manage contract, manage supplies, and make invoices and payments. Therefore, SCM has to make sure that the present and future procurement activities are properly organised, looked into and analysed through effective performance management processes. However, fair competition and the participation of high quality bidders are encouraged by SCM. In addition, risks at all levels are managed through the implementation of effective bid and contract management processes.

## **2.6 Involvement of all stakeholders in the value chain**

Fulfilling a customer request in the supply chain consists of all parties that are involved directly or indirectly. Equally, this includes all functions that are involved in receiving and filling a customer request. For instance, these functions include but are not limited to new product selection, procurement, marketing, operations, distribution, finance, and customer service just to mention a few (Ambe and Badenhorst Weiss, 2011: 78).

As a result, SCM includes a well organised planning and management that forms part of sourcing and procurement, conversion, and all other logistical management activities. In addition, coordination and working together with channel partners, such as supplies, intermediaries, customers and third party service providers. Therefore, in a real situation, this focus on all activities and relationships implies that logistics, marketing, buying/supplying, and production/operations are involved in SCM (Ambe and Badenhorst Weiss, 2011:104).

Successful implementation of SCM is seen as closely dependent upon the need for breaking down barriers not only between internal departments and business processes, but also across companies within the whole supply chain. Its success is also associated with the challenging development of a new culture based on empowerment, on-going shared learning and continuous improvement (Ngotho and Kagiri, 2016). Mwirigi and

Were (2014) argues that strategic partnerships with suppliers enable organizations to work more effectively with a few important suppliers who are willing to share responsibility for the success of the products.

To a great extent, Kenyan Public Institutions further reveal in their study that strategic supplier partnerships affect SCM performance (Mwirigi and Were, 2014). Admittedly, the study exposed that information exchange between public institutions and the stakeholders is accurate, timely, workable and flexible. Correspondingly, their study indicated that the relationship between SCM and suppliers is based on trust, loyalty and commitment and there is a formal way of proper selection of suppliers with distinct defined objectives within the Judiciary.

However, strategic partnerships with suppliers, institutions are able to work effectively with very few important suppliers who are ready to share their expertise and responsibility for the success of the products. In addition, the study reveals that after invoicing, it takes the Judiciary 61 – 90 days to pay their suppliers. It is therefore, in the public domain and evident that organisations pay their suppliers after a period not exceeding 3 months. Well organised institutions can work together to reduce wasteful time and energy.

## **2.7 Capacitating of SCM department**

For the SCM department to deliver the goods and services required by the users, consequently, well-organized SCM workshops and training were arranged across different spheres of government. However, the training workshops were planned to give guidelines in the implementation of SCM (Ambe and Badenhorst-Weiss, 2012:11005). This suggests that, even after the effort of capacitating practitioners with the correct skills and knowledge, the execution still remains a major challenge as the implementation in many government organisations is still far from satisfactory, argues Ambe and Badenhorst-Weiss (2012:11005). Ambe and Badenhorst-Weiss (2012:11018) further reveal the short comings during the application of the prescribed SCM, policies on procurement, procedures and management as the major weaknesses in the government entities.

## **2.8 The guidelines for the implementation of SCM policy**

South African National Treasury provides guidelines for implementation of the SCM policy. The SCM process is guided by policies and legislations. The framework for the SCM system constitutes demand management, acquisition management, logistics management, disposal management, risk and performance management. The framework is guided by the preference point system to achieve re-distribution of wealth and ensuring equal opportunities (National Treasury, 2005).

The components of the supply chain constitute the elements of the SCM. The supply chain is built upon ensuring value for money, open and effective competition, ethics and fair dealings; accountability and reporting and equity. Ensuring these will achieve the ultimate goal of uniformity in procurement processes, good governance and economic development (National Treasury, 2005). The six elements of the SA government SCM and their activities as shown in Figure 2.2 below are briefly discussed next:

## **2.9 Elements of SCM**

### **2.9.1 Demand management**

Need assessment (demand) precedes the implementation of SCM. The objective is to ensure that goods and services delivered comply with specifications of the identified needs. It also ensures that resources required to fulfil needs identified in the college strategic and procurement plan are delivered at the correct time, price and place and that the quantity and quality satisfies the needs (Ambe, 2009:429)

### **2.9.2 Acquisition management**

Mkhize (2004) explains that acquisition management is the actual procurement where each government entity decides on the manner in which the market should be approached, establishes the total cost of ownership of assets, ensures that bid documentations are complete including evaluation criteria, evaluates bids in accordance with published criteria and ensures that proper contract documents are signed.

### **2.9.3 Logistics management**

The South African Management Development Institute (2005) argues that logistics will remain the process of strategically managed acquisition, movement and storage of stock (inventory) through the institution and its marketing channel in a manner that profitability is maximised for cost-effective fulfilment of orders. In addition, this forms part of the supply chain process that implements, controls and ensures an effective flow of stored goods and services (Ambe, 2009:429).

Hugo and Badenhorst-Weiss (2013:287) ascertain that logistic management forms part of the SCM that plans, implements, manage the efficient, effective forward and reverse flow coupled with the storage of goods, services and related information between the point of origin and the point of consumption. Over and above that, it also combines SCM processes with the sole intention of minimising overall logistic costs.

### **2.9.4 Disposal management**

Authorising the disposal of assets that are no longer needed, including unserviceable, redundant or obsolete is the function of disposal management and that gives due consideration to obsolescence planning, creation of a database of all redundant material, inspecting material for the purpose of reuse, determining a disposal strategy and executing the physical disposal process (Ambe, 2009:429).

### **2.9.5 Supply Chain Performance**

Supply Chain performance remains a monitoring tool undertaking a retrospective analysis to make an informed decision on whether the correct processes have been followed and the desired objectives were achieved. In the same way, the South African Government's national treasury came up with a reporting template that is being used by provincial treasuries to monitor SCM implementation process at the relevant institutions (National Treasury, 2005a).

However, institutions are expected to adopt the template in order to continuously improve their supply chain performance. It is against this background that, each government entity should adopt SCM policy to suit its needs. It is therefore evident that, the structures of management of supply chain activities within the country are different. In addition, a

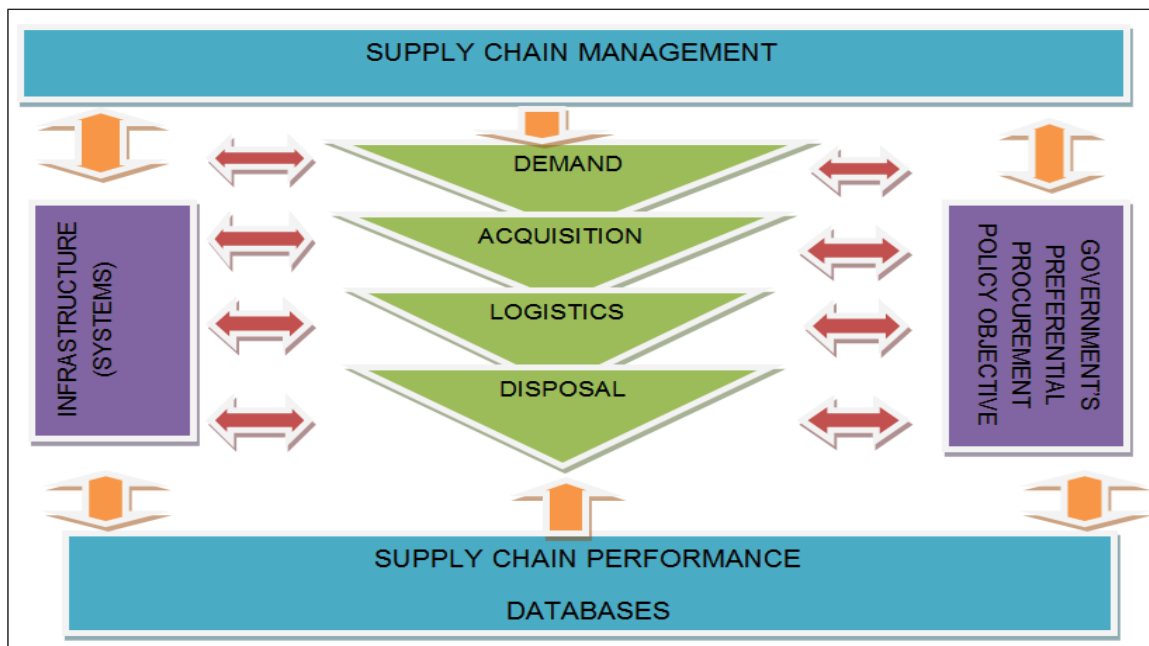
guiding document for institutions on the prescribed roles and duties should be made available to assist those who would like to put SCM into action. It is therefore, imperative for the SCM policy to make provision for the creation of bid committees. As a result, these different committees should include the bid specification committee, evaluation committee and the adjudication committee (National Treasury, 2005a).

Equally, role players in this institution are the executors in the implementation of regulations and policies that include national treasury, provincial treasury, and other stakeholders (Ambe, 2009:429).

#### **2.9.6 Risk management**

Risk refers to the unintended or unexpected outcome of a decision or action. Therefore, risk management further refers to a provision of a good system for identification, consideration and avoidance of potential risks. According to (Ambe, 2009:429), risk management consists of the following:

- Identification of risks on a case-by case,
- Allocation of risks to the party that is best suited to manage it,
- Acceptance of the cost of the risk,
- Management of risk in a pro-active manner and provision of adequate cover for residual risk as well as the assignment of relative risks to the contracting parties through clear and unambiguous contract documents.



**Figure 2-2: Government SCM framework (National Treasury, 2005)**

## **2.10 The legislation that guide SCM implementation**

### **2.10.1 Preferential Procurement Policy Framework Act (PPPFA) (No. 5 of 2000)**

Parliament approved the PPPFA in February 2000 in order to follow the requirement of the constitution. For instance, this Act is a step forward in the right direction for the process of procurement reforms. Accordingly, it has a clear directive framework for the application of preferences in the public sector bidding system.

For this reason, the framework remains applicable to the public sector procurement system of all state organs in the national, provincial and local spheres of government. However, any organ of the state that implements the policy of preferences may only do that within the framework of the Act. Therefore, it is very vital to point out that the preferences system must be applied to all procurement processes. For this reason, PPPFA and the associated regulations promote historical disadvantaged individuals (HDI's) and a broad-ranging set of developmental aims through the allocation of preferences points to different policy objectives (National Treasury, 2005:51).

### **2.10.2 Broad-Based Black Economic Empowerment Act (B-BBEE) (Act 53 of 2003)**

The Act was signed on the 9th of January 2004. However, the Act gave a broad-based charter in the promotion of B-BBEE and issued some codes of practice that could embrace all qualification criteria for preferential procurement and other economic activities (National Treasury, 2005:53). In addition, an amendment of PPPFA was promulgated by the Minister of Finance in 2011, which stipulates that 80/20 or 90/10 preferential points must be awarded to a potential bidder for getting the B-BBEE status level of contribution in accordance with the table below. All government institutions including Elangeni TVET College, are expected to implement the B-BBEE scoring systems during the evaluation of the bids or quotations received in order to assist the emerging businesses so that they participate in the procurement processes.

**Table 2-1: B-BBEE status level of contribution**

<b>B-BBEE Status Level of Contributor</b>	<b>Points allocation (90/10 system)</b>	<b>Points allocation (80/20 system)</b>
<b>1</b>	10	20
<b>2</b>	9	18
<b>3</b>	8	16
<b>4</b>	5	12
<b>5</b>	4	8
<b>6</b>	3	6
<b>7</b>	2	4
<b>8</b>	1	2

**Source: PPPFA 2011**

### **2.10.3 Constitutional provisions**

Section 217 (1) of the Constitution of the Republic of South Africa, of 1996 provides the basis for procurement and determines that when an organ of state in the national, provincial or local sphere of government, or any other institution identified in national legislation, contracts for goods or services, it must do so in accordance with a system which is fair, equitable, transparent, competitive and cost-effective (Constitution of the Republic South Africa 1996).

#### **2.10.4 Public Finance Management Act (PFMA) (Act No. 1 of 1999)**

Public Finance Management Act (PFMA), (Act No. 1 of 1999) as amended by (Act No. 29 of 1999), is one of the most important laws passed by the first democratic government in South Africa. In addition, the Act promotes good financial management in order to give the best service delivery through effective use of the limited resources, (National Treasury, 2005).

#### **2.11 Establishment of bid committees**

The accounting officer of an institution should appoint SCM bid committees, namely, a bid specification committee, bid evaluation committee and bid adjudication committee, to perform a different function within an institution with regards to the supply chain function (National Treasury, 2003:3).

##### **2.11.1 Bid Specification Committee (BSC)**

This committee is responsible for putting together the bid specifications based on the requirement of an end user. This committee should be composed of officials of department requiring the goods or services. An external expert adviser may be appointed if there is no official within the institution with the necessary required expertise. However, the accounting officer of an institution should approve the specification before the advertisement of the bid (National Treasury, 2003:3).

##### **2.11.2 Bid Evaluation Committee (BEC)**

This bid committee is in charge of making sure that all bids received are in line with criteria specified in the bid document. The committee should be composed of supply chain practitioners and officials from the end user departments. The bid evaluation committee must evaluate all bids received and prepare a report for the submission of the same report to the bid adjudication committee for consideration (National Treasury, 2003:3).

##### **2.11.3 Bid adjudication committee (BAC)**

The bid adjudication committee considers the report from the bid evaluation committee together with the relevant documentations. The bid adjudication committee should consist of least four senior managers from the institution. The chairperson of the bid adjudication

committee should be the Chief financial officer of the institution. One member should be a supply chain practitioner. The bid adjudication committee must consider the recommendations made by the bid evaluation committee and make a final award or make recommendations to the accounting officer for the final award of the bid (Code of conduct for the bid adjudication committees, section: 2.4).

Section: 2.6 of the Code of conduct for bid adjudication committees stipulates that in cases where the bid adjudication committee approves a bid other than the one recommended by the bid evaluation committee, the accounting officer must first be notified. Depending on the delegation granted by the accounting officer, the bid adjudication committee could take the final decision on awarding the bid or make recommendations to the accounting officer for the final awarding of the bid (National Treasury, 2003:4).

## **2.12 Establishment of supplier's database/Central supplier database**

Previously, all government departments were required to advertise on the local newspapers inviting prospective service providers to register on the department database. Recently, a number of technological SCM innovations have been phased in since 2015 and compliance to them has become compulsory from 1 April 2016 (SCM Review Update, 2016:6).

They include the Central Supplier Database, e-Tender Portal and e-Procurement. These would result in the reduction in the administrative burden for government and business; they will also improve consistent reporting of procurement information, intelligent analysis of procurement data and enhanced sourcing strategies, as well as effective monitoring of procurement patterns, contracts and prices (SCM Review Update, 2016:7).

The Central Supplier Database (CSD) for Government has been introduced on 1 September 2015. All suppliers who want to conduct business with government departments are required to register on this database (SCM Review Update, 2016:7). The CSD automates the verification of tax clearance certificates, company registration information, Broad Base Black Economic Empowerment (BBB-EE) status and personal identification information. Enhancements are being made to interface with government payroll systems.

The introduction of the CSD has reduced the cost of doing business significantly as suppliers no longer have to incur costs of acquiring these administrative documents and register on the databases of each department, municipality and public entity (SCM Review Update, 2016:7). On the other hand, this resulted in the reduction in tender documents required for submission when responding to a tender; reduced the possibility for corruption; and addresses the administrative (SCM Review Update, 2016:7).

Over 71 000 users have accessed the site in February 2016 alone with an average session of 6 250 per day, it takes on average 15 minutes and 36 seconds to register on the CSD (SCM Review Update, 2016:7). With the establishment of central supplier database, key information of the prospective suppliers will be verified on the CSD in line with PFMA and regulatory requirements (National Treasury Instruction number 4A of 2016:2). The following are some of the information that can be verified through the CSD system:

Business registration, including details of directorship and membership

- Bank account holder information
- In the service of the state status
- Tax compliance status
- Identity number
- B-BBEE status level
- Tender defaulting and restriction status
- And any additional and supplementary verification information communicated by the National Treasury of South Africa.

### **2.13 Differences between Public sector SCM and Private sector SCM**

Public sector procurement forms the biggest national spend and in South Africa, it is decentralized within a strictly controlled legislative environment wherein processes are prescribed and the relevant norms and standards constantly monitored (Ambe and Badenhorst-Weiss, 2011:83).

Public sector practitioners are governed by legislative bodies, laws, and regulations while private sector practitioners are guided by boards of directors and business plans (McCue and Pitzer, 2005). Public agencies draw revenues from taxes and fees, and use these funds

to serve the public while private firms generate revenue through sales of goods and services McCue and Pitzer (2005). Unlike in the public sector where the value for money is the motive, the private sectors has the profit-making motives (McCue and Pitzer, 2005)

It is evident that there is a difference in the application of SCM in the public and private sectors. This is because the two sectors have diverse goals and objectives. In fact, the main goal in the public sector is delivery of valuable service to the public, while the private sector goal is to maximize value and profitability in its supply chain (Ambe and Badenhorst-Weiss, 2011:86).

Table 2.2 below depicts the differences in practice between private and public sectors SCM.

**Table 2-2: Public versus Private sector SCM**

<b>Feature</b>	<b>Private sector</b>	<b>Public sector</b>
<b>Goal</b>	Profit making from customers	Quality service delivery to citizens
<b>View of SCM</b>	Procurement is viewed as an element of SCM	SCM is viewed as a procurement tool
<b>Sources of revenue</b>	Sale of goods and services	Taxes and fees
<b>Governance</b>	Guided by board of directors and business plans	Legislative bodies, laws and regulations
<b>Skills</b>	Have highly skilled actors	Have less skilled actors
<b>Receptiveness</b>	Emphasis on innovation and entrepreneurship	Emphasis on accountability and transparency
<b>Organizational structures</b>	Firms of many sizes with room for new entrants (less complex)	Highly complex system of organizations with various tasks
<b>Competencies</b>	Very high	Low
<b>Confidentiality</b>	Very high	Low
<b>Degree of collaboration</b>	Very high	Low
<b>Degree of integration</b>	Very high	Low
<b>Strategic partnership</b>	High level	Low Degree
<b>Degree of implementation</b>	High	Low

Source: (Ambe and Badenhorst-Weiss, 2011:84)

## 2.14 Conceptual framework underpinning SCM

Previous sections discussed the SCM strategy and processes, and this section will discuss the theory that underpins SCM, in particular the implementation and its strategy. A conceptual framework is an alignment of the key concepts of a study that can be seen as

the precise course to be followed when pursuing research (Henning Van Rensburg and Smit 2013:26).

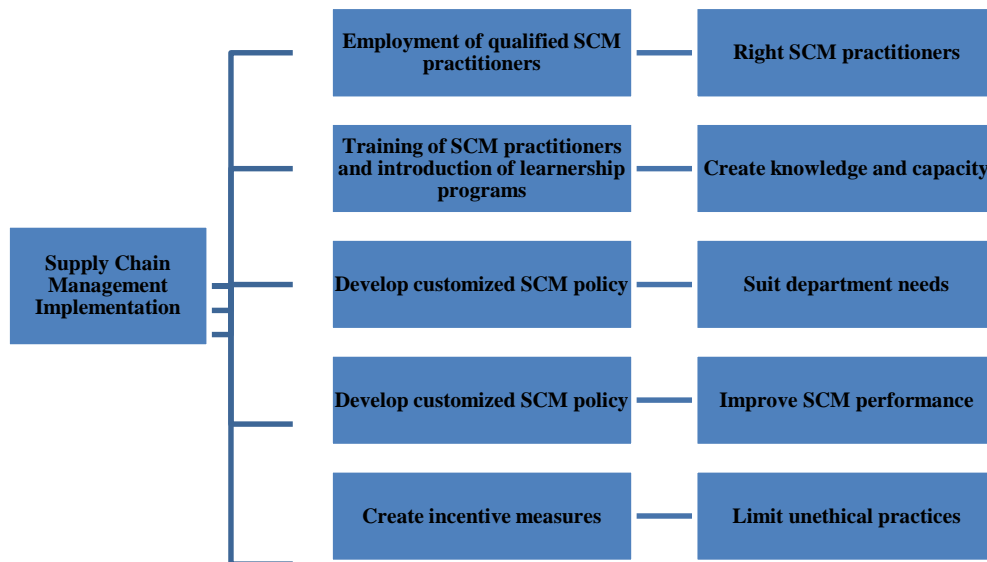
This study draws on the work of Ambe (2012) which suggests that an implementation framework needs to be in force in the public sector for the successful implementation of SCM strategy. Ambe (2012) further ascertain that adequate capacity in the form of appropriate structures with fully skilled and professional SCM personnel are the key success factors for proper SCM implementation.

#### **2.14.1 Implementation framework**

The researcher has developed the conceptual framework on the basis of Ambe (2012) model. The model has five (5) major elements as shown in Figure 2.2 below that leads to the successful implementation of SCM:

- Employment of qualified SCM practitioners
- Training of SCM practitioners and introduction of Learnership programs
- Develop customized SCM policy
- Develop monitoring and performance measures
- Create incentive measures

Figure 2.3 on overleaf presents a schematic framework of the SCM implementation model which illustrates the inter-relationships within SCM.



**Figure 2-3: Framework for SCM implementation (Ambe and Badenhorst-Weiss 2012:11013)**

#### **2.14.2 Employment of qualified SCM practitioners**

An institution needs to employ qualified SCM practitioners at the right place and time. There has been much opportunity for training and workshops attended by SCM practitioners in the South African public, but they still lack adequate and appropriate knowledge for proper implementation. According to McCarthy (2006:4), the totality of tender documents in government entities is difficult to verify because the register is incomplete and there is also the lack of capacity and knowledge to handle procurement processes that contributes to bad governance.

The engagement in an on-going training plan, and to introduce Learnership programs in SCM to create awareness of policy guidelines and regulations, is vital. This will create knowledge and skills and solve the problem of capacity. These issues have been reiterated in studies done by Van Zyl (2006) as well, consequently, non-compliance is due to the fact that different levels of government lack of skills, capacity and knowledge of the workforce to be able to fully implement SCM processes Matthee (2005:6) and Ambe and Badenhorst-Weiss (2011b).

#### **2.14.3 Develop customized SCM policy**

The development of a customized SCM policy is required that will suit the needs of the department. The SCM policy requires each government department to develop and implement a customized SCM (Ambe 2012:11012).

Equally, the question of non-compliance has become a major limitation in the execution of SCM as it affects other activities. However, the issue regarding non-compliance to SCM policy and regulations cannot be over-emphasized as it can be attributed to lack of the requisite skills and competencies as well as the absence of firmer control measures, (Ambe 2012:11012).

#### **2.14.4 Develop monitoring and performance measures**

Monitoring and evaluation is an important aspect of the SCM. Consequently, this will assist the SCM to measure its performance and ensure that proper guidelines and principles are followed. Thus, less monitoring and evaluation is linked to the unavailability or poor presence of a control environment. In fact, this lead to the government entities to find themselves in a very difficult situation to provide tangible effect to or implement SCM as required by the policy. Hence, these deviations or non-compliance that go unnoticed or is identified at later stage, (Ambe 2012:11012) are not acceptable.

#### **2.14.5 Create incentive measures**

The implementation process of SCM will be supported by the introduction of hard working practitioners with their incentive measures as a motivating factor for better performance and limit unethical practices, (Ambe 2012:11011).

### **2.15 SCM challenges**

Following are some of the challenges that were highlighted by the National Treasury in 2015. Accordingly, a number of issues prevent public sector in the SCM from performing as it should, because its strategic importance is not well understood and those working in the system need to understand the economic dynamics and social power of the purchasing decisions that they make (SCM Review, 2015). Translating budgets and strategic plans into deliverables requires an efficient public SCM system which is well-resourced,

functions efficiently and whose central importance is recognised. The organisational structures and systems within which SCM takes place are in too many cases not ideal, with inexperienced or under-skilled leadership, high staff turnover and lack of motivation. There may also be a lack of suitable equipment, such as computers with dependable internet connections; or information, such as databases giving up-to-date details of available products and services (SCM Review, 2015).

#### **2.15.1 Inadequate planning and linking demand to the budget**

One of the big challenges to the SCM implementation is due to the fact that not enough planning is done. On the contrary, cost-effective procurement depends on the expertise and or specialist skills that will make sure that purchasing requirements are reliably determined, correct contract strategies are well designed and managed, and the opportunities to secure the best deal at the right time, price and place.

Likewise, the demand management process forms an integral part in any procurement process as it defines the decision making process that allows departments to procure at the right time, place, and price. However, many government departments still face the challenges of inadequate planning and linking demand to budget.

However, this may be as a result of limited skills and capacity. In addition, training and workshops were important for the successful implementation of SCM and this was acknowledged by Ambe and Badenhurst-Weiss (2011b).

#### **2.15.2 Inadequate and inconsistency to risk management/irregularities in SCM**

Risk management forms part of the major challenges. In addition, it is revealed in the findings of this study that there is a lack of internal control environment and the implementation of risk mitigation procedures through the effective utilisation of SCM policy procedures.

This has led to fraud and corruption activities. Similarly, it is common knowledge that fraud and corruption and other administrative malpractices within government entities impede SCM, (Smart Procurement, 2011). Therefore, lack of understanding regarding the concept of SCM and its inextricable link to long term quality service delivery, human

capital development and associated socio-economic growth, may be the root cause of problems beleaguering SCM in government, argued Boateng (2012).

As a result, Boateng (2012) made an assertion that, since 1994, South Africa has enjoyed unprecedented social and infrastructural support. Quite frankly, the majority of the people who hoped freedom would bring with it relative socio-economic liberation and improvement in their lives are feeling increasingly bitter towards government over issues including a lack of perceived quality governance, uncompromised and timeous service delivery failure, corruption in some sphere of the economy and disillusionment with empowerment policies,

### **2.15.3 Ethics and conflict of interest**

SCM implementation is largely affected by ethics and conflict of interest. This suggests that, there is huge power wielded by some chief financial officers (CFO's) and lack of proper consultation with other senior officials. Yet, there is a National Treasury Guide to Accounting Officers that prescribes a standard approach towards SCM procedure when in essence the autonomy given to accounting officer's financial management and the lack of application resulted in department's utilisation discretion to procure in a way that would be proper for a specific period of time. Finally, the whole exercise ended-up in different approaches and a lack of standards in general.

### **2.16 Chapter summary**

There is global agreement that SCM is an important aspect of every organization and therefore important that organizations practice processes of SCM. This chapter dealt with a different kind of definitions of supply chain management, and while there are different definitions acknowledge, the Council of SCM professionals defines it as inclusive to the planning and management of all activities involved in sourcing and procurement, conversion, and all Logistics Management activities (Naslund and Williamson 2010:5). Furthermore, the chapter has dealt with strategies, policies and legislation that guides supply chain management strategy. According to Chapter 13 of the Constitution of the Republic of South Africa, section 172, this is of vital importance. Moreover, the chapter also looked at the SCM implementation challenges in the public sector.

## **CHAPTER THREE: RESEARCH DESIGN AND METHODS**

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### **3.1 Introduction**

The previous chapter reviewed the historical information of the supply chain management, the importance of the study, its definition, implementation strategies and the effectiveness at Elangeni TVET College. Therefore, it states the research change, and how it should be done and further looks at the questions that ultimately led to the right answers. Consequently, the motive behind the methods used in the demonstration and the application thereof are elaborated in the chapter, as well as the limitations and ethical considerations.

### **3.2 Paradigm**

Durrheim (2007:40) defines paradigms as systems of interrelated ontological, epistemological, and methodological assumptions. They act as perspectives that provide a rationale for the research and commit the researcher to particular methods of data collection, observation, and interpretation.

Paradigm is further described as beliefs that should be studied as a researchable area and perceived findings that would give directive on how outcomes can be best understood by the researcher argued Bryman (2012) and cited by du Plooy-Cilliers (2014). It remains a fact that there are three very important research positions, the positivist, interpretivist and constructionist. The logical positivism position uses a quantitative approach, while interpretive uses a qualitative approach.

There are also three dimensions or traditions of research paradigms and these propose their own philosophy, epistemology and the manner in which research is done (Terreblanche, 2007:6). The evidence is the nature of reality that can be studied and can be known. The nature of the relationship between the researcher and what can be known is described as epistemology. Lastly, the manner in which the researcher may go about studying can be practical in whatever he/she thinks can be known

This study will be underpinned by the positivist research paradigm because the researcher believes that the reality that will be studied consists of stable external reality. This research paradigm is chosen by the researcher as it enables him to understand view that

social reality is in an endless state of fluctuation and dependent on the way in which individuals experience reality internally.

### 3.3 Research settings

Research setting is the place where the researcher will conduct the study, a place that is suitable and feasible as described by Denscombe (2014), as a result, the research will be conducted at Elangeni TVET College central office Durban, in KwaZulu Natal. The college has nine (9) sites including its administration office. The college services eight (8) campuses within Durban metro and one at Ndwedwe local municipality.



**Figure 3-1: Map of Elangeni TVET College area of jurisdiction**

### 3.4 Research Design

Webb and Auriacombe (2006:589) describe a research design as a set of guidelines and instructions on how to reach the goal that the researcher has set for himself/herself. On the contrary Yin (2009:26) defines research design as a plan that guides an investigator in the collection, analysis and observation and interpretation process. Therefore it is

considered to be a consistent model of proof that allows the researcher to draw inferences concerning casual relations among variables under investigation. This suggests that, the research design is a blueprint for research, dealing with at least four problems, such as the questions to study, the relevance of the data, what data to collect and how to analyse the results (Yin 2009:26).

However, Rowley (2002:18) defines research design as the logic that links the data to be collected and the conclusions to be drawn to the initial questions of a study; it ensures coherence. Similarly, another way of viewing a research design is to see it as an action plan for getting from the questions to conclusions.

Instead, the researcher intends to utilize the descriptive and case study design. A descriptive research depicts a picture of the specific details of a situation, social setting or relationship, and focuses on “how” and “why” questions (Neuman, 2000:22). Neuman (2000) also further explains that a descriptive research is used to obtain information concerning the current status of the phenomena to describe “what exists” with respect to variables or conditions in a situation.

It is for this reason the researcher chose a descriptive case study design, the researcher want to understand why there is a lack of skilled SCM practitioners ,and also why there are in-effective SCM committees at Elangeni TVET College that are supposed to assist in the SCM processes. The researcher will also want explore the challenges being experienced by the beneficiaries of the SCM processes and to examine the impact in service delivery as a results of these challenges as well as the perception of the SCM beneficiaries at Elangeni TVET College

### **3.5 Research Methodology**

Research is described as a process of looking for answers to find a solution to a problem, which contributes to the body of knowledge in order to understand the phenomenon, situation or behaviour under study (Plooy- Cilliers, 2014). Equally, research methodology is the term that is used to describe methods and tools, procedures and techniques that are used during the research process to find answers to the research problem (Welman, 2005).

### **3.5.1 Quantitative Research Methodology**

The quantitative design is a means of testing objective theories by examining the relationship between variables. For instance, on the one hand, these variables can be measured on instruments so that the numbered data can be analysed using statistical procedures. On the other hand, this study employs the quantitative research method with an understanding that quantitative study will provide a numerical rating of information and the researcher believe that Elangeni TVET College management will be assisted to give attention to those areas that will be identified.

The researcher used the survey design because it provides a quantitative or numeric description of trends, attitudes, or opinions of a population by studying sample of that population. From the sample results, the researcher would generalize or makes claims about the population. Even if the sampling size is insufficient to generalise the findings, the results are still meaningful for understanding perceptions of those who did participate in the study. The quantitative approach was used to pursue the study because respondents to participate in the research were identifiable and known (SCM practitioners, SCM committee members and all other role players in the SCM processes) and also those who were in a position to provide meaningful data.

### **3.5.2 Case Study Research Strategy**

The case-study strategy was used as the research strategy. It follows that, case studies emphasise detailed contextual analysis of a limited number of events or conditions and their relationships. In addition, Yin (1994) cited in Webb and Auriacombe (2006:472), defines the case-study research method as an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used. He further argues that the researcher explores a single entity or phenomenon, the case, bound by time and activity (a programme, event, process, institution, or social group) and collects detailed information by using a variety of data-collection procedures during a sustained period of time. Social scientists have made wide use of this qualitative research method to examine contemporary real-life situations and provide the basis for the application of ideas and extension of methods. This study used Elangeni TVET College in Durban as a case study. The reason why the researcher chose

a case study method is because case study provides rich information about individuals or particular situations (Lindegger, 2007:461). Lindegger (2007), further states that the advantages of the case study method is that they allow new ideas and hypotheses to emerge from careful and detailed observation.

However, the key issue is that the case study should only ask questions about the unit of analysis, and any sub-units; sources of evidence and the evidence gathered are determined by the boundaries that define the unit of analysis. Therefore, Rowley (2002:22) adds that embedded designs identify a number of sub units (such as meetings, roles or locations) each of which is explored individually; results from these units are drawn together to yield an overall picture.

The units of analysis for the study were Elangeni TVET College at the Central office which were embedded as subunits and four segments of stakeholders represented different position levels and were a mix of those employees being evaluated in the effectiveness of SCM and those conducting the evaluation of bids and quotations received from the service providers.

### **3.5.3 Study site**

The research was conducted at Elangeni Technical and Vocational Education and Training College in Pinetown, Durban in KwaZulu Natal Province. The study was conducted at Elangeni TVET College central office only because of the centralised procurement system used by the college.

### **3.5.4 Target population**

Rensburg (2010) defines population as the entire group of persons or objects in which the researcher is interested to investigate. Similarly, Terreblanche (2010) further describes target population as the larger pool from which our sampling elements are drawn and to which we want to generalize our findings. The target population for this study was comprised of employees who are directly or indirectly involved in the SCM processes at Elangeni TVET College central office. The researcher did not include the whole population but a sample of 60 was drawn as next explained.

### 3.5.5 Sampling

Sekaran and Bougie (2013) defines sampling as the collection of an adequate number of representative elements from the study population, and notes that the attributes of the elements must be such that it is possible to generalise the finding to the target population if possible. Rowley (2014) further highlights sampling as the important aspect of the research. Authors like Bryman and Bell (2011), Sue and Pitter (2012) notably give a detailed argument on the advantages and disadvantages of diverse sampling techniques. The summary of different sampling techniques as provided by Rowley (2014) is reported in Table 3.1 below.

**Table 3-1: Sampling types**

Sample type	Description
<b>Probability sampling</b>	
<b>Random</b>	Elements are selected at randomly, with no particular preferences.
<b>Stratified</b>	Elements are profiled as per study objectives (such as job level, number of years worked) and a representative sample is chosen from every category.
<b>Cluster</b>	Targeted study elements are separated according to clusters segments (province, by city) and a sample is chosen at random.
<b>Non-probability sampling</b>	
<b>Systematic</b>	Representative elements are chosen by following a sequence (5, 10, 15 etc.).
<b>Quota</b>	Representative elements are chosen on the base of set criterion to guarantee that the element is across targeted elements.
<b>Purposive</b>	The sample is handpicked to participate in the study and the investigator has some prior knowledge regarding the sample.
<b>Convenience</b>	The representative element is drawn from populations which are reachable e.g. organisation in a different province.
<b>Snowball</b>	A small number of key elements are chosen and requested to suggest other related persons.

Accordingly, Rowley (2014) further explains probability sampling as where all representative elements of the targeted population have an equal mathematical opportunity of being chosen as study participants, and the opposite is in non-probability

sampling. This suggests that, in probability sampling, a sample is a representative of the targeted study population and allows statistical generalization of the targeted population of the study to be credible. However for non-probability sampling technique, representative elements do not have a predestined opportunity of being chosen as study subjects.

For this reason, the researcher chose probability sampling for this study because of the following:

- Every SCM practitioner represents the population of SCM department and had a chance of being selected.
- All role players in SCM processes at Elangeni TVET College are known and available to be selected.
- The probability sampling will produce relatively unbiased findings and those findings may be generalizable to the population of Elangeni TVET College depending on the sample size.

The total target population of this study consisted of 150 individuals with the total breakdown between different levels reported in Table 3.2 below.

Table 3.2 illustrates the target population and the sample size at the Elangeni TVET College Central office. Of the 150 potential respondents, 60 respondents were the desired sample size.

**Table 3-2: The target population at the Elangeni TVET College Central office**

Target Group (Departmental Managers and staff members from campuses)	Population	Sample size per site	Sampling method	Data Collection Tool
<b>Central office staff</b>	64	18	Random Sampling	Survey Questionnaires
<b>Pinetown Campus</b>	12	4		
<b>Mpumalanga Campus</b>	14	4		
<b>Qadi Campus</b>	8	4		
<b>Kwa-Dabeka Campus</b>	8	4		
<b>Inanda Campus</b>	8	4		
<b>Ntuzuma Campus</b>	14	4		
<b>Kwa-Mashu Campus</b>	14	4		
<b>Ndwedwe Campus</b>	8	4		
<b>Overall Total</b>	<b>150</b>	<b>60</b>		

The researcher used random sampling method because he wanted to understand the impact of the implemented SCM strategy at Elangeni TVET College from the officials who are directly or indirectly involved in the day to day procurement processes at the college. Using the random sampling method means that that each individual in the target population has an equal probability of participating, and the sample could be generalised to the larger population (Creswell, 2009:217). However, it is acknowledged that the sample size is a bit small to generalise findings to the target population. Nevertheless, findings from this study shed light on perceptions of those who did participate in the study.

For this study, the survey research technique was most appropriate because it enabled the researcher to collect information from a large group of respondents, control for time, and determine associations or establish causes (Creswell, 2009). The statistical findings from a sample of respondents from a population can be used to describe quantitative or numeric trends, attitudes or opinions for a broader research population (Creswell, 2009:218).

### **3.6 Recruitment strategy**

After obtaining permission from Elangeni TVET College Principal to conduct this research, questionnaires were prepared and distributed to the respondents for completion (see Appendix A).

### **3.7 Data Collection method and tools**

#### **3.7.1 Survey questionnaires**

According to Rowley (2014), the survey questionnaire is the preferred and convenient mechanism to collect data, especially in business and management research and social sciences research. Moreover, Rowley (2014) states that questionnaires are used to conduct quantitative research, where a researcher wants to assign numeric importance to the data. In addition, questionnaires are cost-effective and less labour intensive in comparison to interviews and observations. As a result, questionnaires are designed to collect large numbers of quantitative data. Rowley (2014) explained that questionnaires

are suitable when gathering data from a wider spectrum of population in order to generalise the research findings where possible.

In fact, questionnaires are the preferred and most effective technique for gathering data in business research due to their efficiency and cost effectiveness. Questionnaires are suitable to collect massive volume of quantitative data. A questionnaire, though being preferred and an efficient data collection mechanism, has the drawback of low response rate. Alternatively, questionnaires can be manually administered, be distributed by post to the study participants or be emailed via computer. Hence, the researcher may use survey questionnaires because the researcher seeks to attach numeric data to the attitudes and beliefs of users and beneficiaries of the SCM processes at Elangeni TVET College.

In addition, a survey research design involves collecting data by putting a set of pre-formulated questions, in a pre-determined sequence in a structured questionnaire, to a sample of individuals drawn who are representative of a given population (Fox and Bayat, 2010:87).

In the same way, Joop and Boeije (2005:593) state that primary data is data that is collected for the specific research problem at hand, using procedures that fit the research problem best.

Accordingly, the questionnaire for this study was administered personally by the researcher as the research was confined to Elangeni TVET College. All respondents were based at various sites of the Elangeni TVET College as shown in Table 3.2.

The advantages of personally administered questionnaires are as follows:

- 100% response rate is guaranteed
- Any doubts about the question by the participant can be clarified on the spot by the researcher

### **3.8 Unit of analysis**

As described in Rowley (2002:19), the unit of analysis is the basis for the case. However, it may be an individual person (such as a business leader, or someone who has had an experience or interest), or an event, (such as a decision, a programme, an implementation

process or organisational change), or an organisation or team or department within the organisation change. The units of analysis for this study were the individual participants as shown in Table 3.2.

### **3.9 Data analysis**

Once data were collected using a questionnaire, it was then coded and edited. It was interpreted using statistical software. Statistical software is used to analyse data because it uses a spreadsheet format which is an excellent tool for importing and exporting data and results.

To analyse quantitative data, the researcher used the Statistical Package for Social Sciences (SPSS); tables, graphs and charts were used to summarise the data collected as described below. However, out of the population of one hundred and fifty (150) employees at the college that are directly or indirectly involve with SCM processes, 57 of the 60 respondents desired, participated in the study.

According to Creswell (2009:183), the process of data analysis involves making sense of the text and image. For instance, regarding the quantitative research method, Creswell (2009:218) points out that data analysis relates to the type of research strategy chosen for the procedures. For the purposes of the study, which involved the quantitative method of data collection, the researcher used the SPSS. Ultimately, the results and the findings obtained from the questionnaire used in this study will be presented later in this section.

The aim of data analysis is to transform information into an answer to the original research question, a careful consideration of data analysis of strategies will ensure that the design is coherent as the researcher matches the analysis to a particular type of data (Durrheim, 2007: 86).

### **3.10 Data Quality Control**

#### **3.10.1 Validity**

Validity is the precision of an instrument measurement that strengthens the research conclusions, inferences and propositions (Tavakol and Dennick, 2011). According to Twycross and Shields (2004:28) validity means that a tool measures what it is meant to

measure and mentions that there are several measures of validity that provide evidence of the quality of a study. To promote validity, the researcher reviewed the survey instrument with his supervisors and experts.

### **3.10.2 Reliability**

Reliability refers to the dependability of a measurement instrument, that is, the extent to which the instrument yields the same results on a repeated trial (Madlingozi, 2010:208). Marr-Lyon, Gupchup and Anderson, (2013), describe reliability as the consistency of the measuring instrument. What is important about reliability is that it is not measured but estimated either by doing retest or internal consistency. Test or retests is done by administering a measurement instrument at two different occasions measuring the similar concept, assuming that there was no change in the base conditions. Thus, reliability is defined as the consistency, stability and repeatability of results. In addition, the testing of reliability ensures that those consistent results would be obtained in identical situations on different occasions. In this study, the same survey instrument was used on multiple campuses.

### **3.11 Ethical issues**

Ethics in research refers to getting an informed consent from those who are going to be interviewed, questioned, observed or from whom materials are taken (Fox and Bayat 2010:148). The researcher assured all the participants about the confidentiality of the information as well as access to the information they will have shared with the researcher. The ethical clearance letter was obtained from the relevant authorities, (Appendix C). Since voluntary participation is a principle that requires that people not be forced to participate in a research and that if they have agreed to participate, they are free to withdraw at any time they wish during the research. The researcher informed the participants of their rights.

This suggests that, Informed consent means that prospective research participants must be informed fully of the procedures and risks involved in research and they must give their consent to participate. In addition, they are also free to withdraw at any time they feel that they are at risk. All the participants were informed of the process and their rights to withdraw if they so wish, (see the Informed consent form attached as Appendix B).

Privacy or confidentiality were maintained throughout the research period and afterwards. The information or responses received from the participants will be confidential and will be kept in a confidential place and the access to it will be controlled. The anonymity was maintained throughout the research and will be maintained during dissemination of the research findings.

The benefit to the participants is that the researcher may inform the management of the college about the outcome of the study and if they so wish, the recommendations from the study can be implemented to improve the processes within SCM of the college. By doing so, the participants may be proud that they were part of the study that has brought the improvement in their organisation.

## **CHAPTER FOUR: DATA PRESENTATION AND ANALYSIS**

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### **4.1 Introduction**

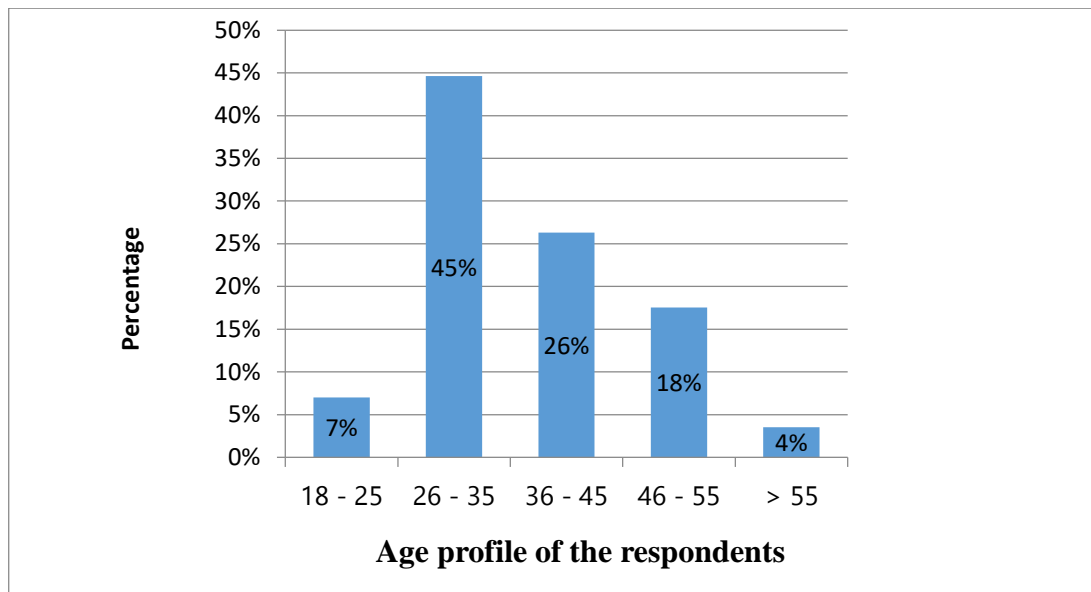
The main aim of this study was to evaluate the SCM strategy of Elangeni TVET College. This chapter presents the results and discusses the findings of this study. The results are presented in descriptive statistics in the form of graphs, cross tabulations and other figures for the quantitative data that was collected and the implementation thereof.

The chapter begins with a brief summary to illustrate the demographic of the respondents and after the introduction, the chapter present the information relating to the four broad research questions: (a) it presents the data gathered and collected from the respondents in relation to the SCM strategy and processes of the Elangeni TVET College, (b) it presents the information obtained from the respondents in relation to SCM experiences of the stakeholders in the value chain, (c) it presents the information collected from the respondents relating to factors that facilitate or hinder the procurement strategy of the college, and lastly (d) it presents the data collected relating to the capacity and resources of the SCM department in the college. The chapter concludes by discussing observations and findings of the study as informed by the conceptual framework discussed in the second chapter.

### **4.2 Demographical information**

Accordingly, the respondents' demographic data in terms of the race, gender, age, experience, position in the organization and their highest qualification are clearly stated in this section.

Figure 4.1 below presents the results gathered from the preliminary analysis of the age classification of the respondents.

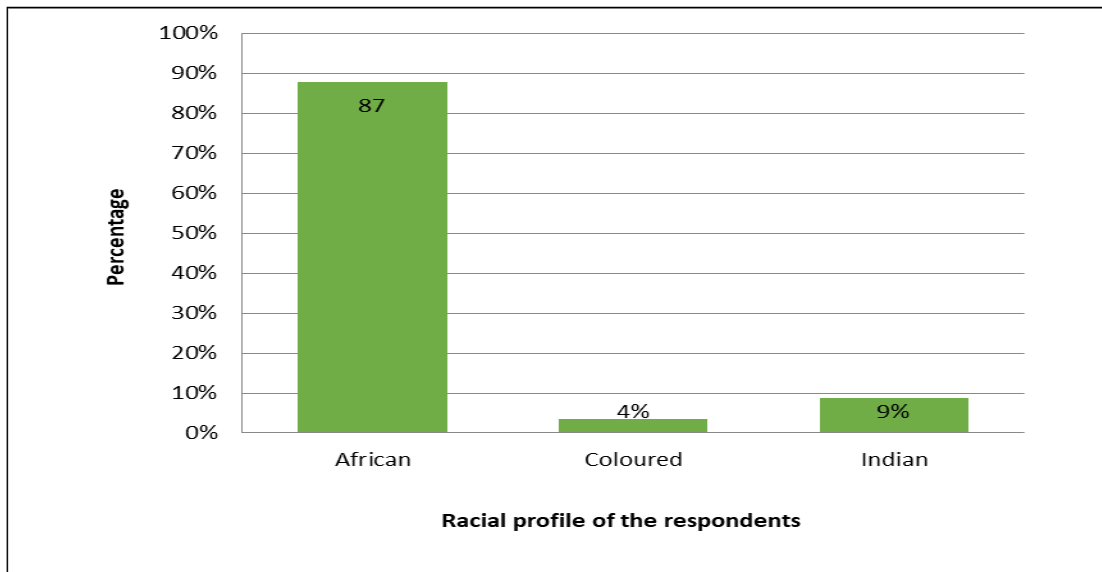


**Figure 4-1: Age group**

The age profile reflects that 45.6% of the respondents are between the ages of 26 and 35 years which means the majority of the workforce is young, while 3.5% of the respondents are above the ages of 55. This could mean that even though a larger percentage of the respondents are the youth, but the second largest percentage of 26.3% of the respondents are from a more mature age group between the ages of 36 and 45. This could be positive in terms of coaching and skills transfer within the organisation.

#### **4.2.1 The classification of the respondents according to their race**

The racial profiling of the study participants is depicted in Figure 4.2 below. This represents a total of 57 (95%) of the 60 sought after participants. Hence, the response rate of the sample size was 95%.

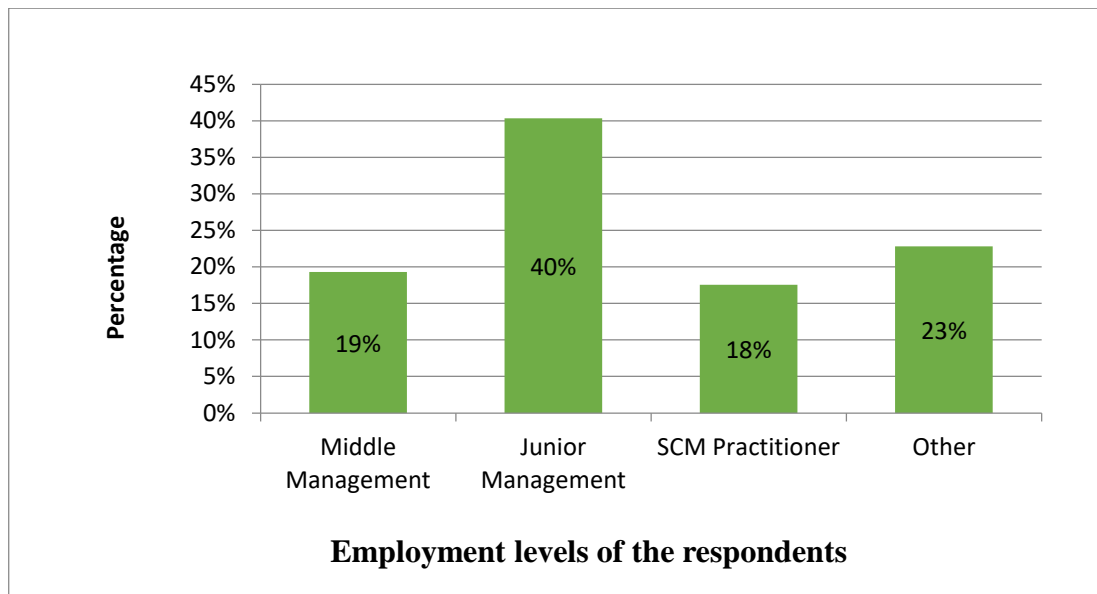


**Figure 4-2: Racial group information**

This section outlines the racial information from the respondents. As can be seen in Figure 4.2 above, 87.7% of the respondents were African and the lowest representation is the Coloured race with 3.5%. This is an indication that the majority of employees at Elangeni TVET College are African.

#### **4.2.2 Positions of respondents at Elangeni TVET College**

The position of the employees indicates the kind of job they perform at Elangeni TVET College. The distribution of respondents according to their employment position at Elangeni TVET College is shown in Figure 4.3



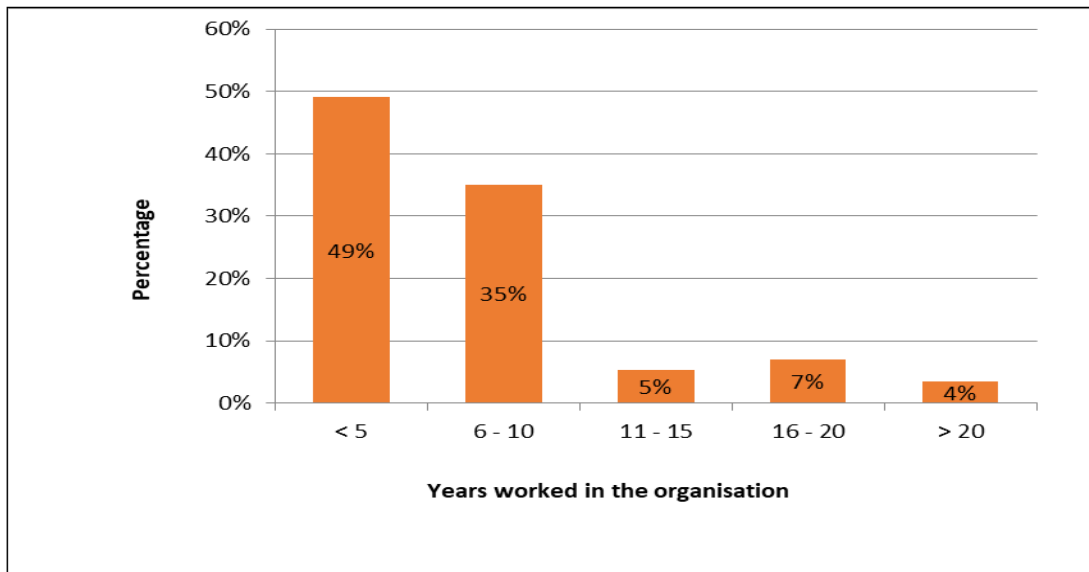
**Figure 4-3: Employment positions**

A larger percentage (40.4%) of the respondents are holding junior management positions, which are directly involved in the day-to-day operations of the business. About 22.8% of the respondents are holding other positions in the college but are also involved in the SCM activities.

Only 19.3% of the respondents are people who hold middle management positions and are part of the SCM committees which are tasked with the evaluation of all quotations and tenders advertised by the college. Another 17.5% of the respondents are people who are holding different positions within the SCM department.

#### **4.2.3 Length of employment service at Elangeni TVET College**

This section of the questionnaire sought to understand the number of years of employment with the college and this suggests that, they might have problems in understanding the SCM processes. Figure 4.4 reflects the experience and expertise of the respondents in the college.

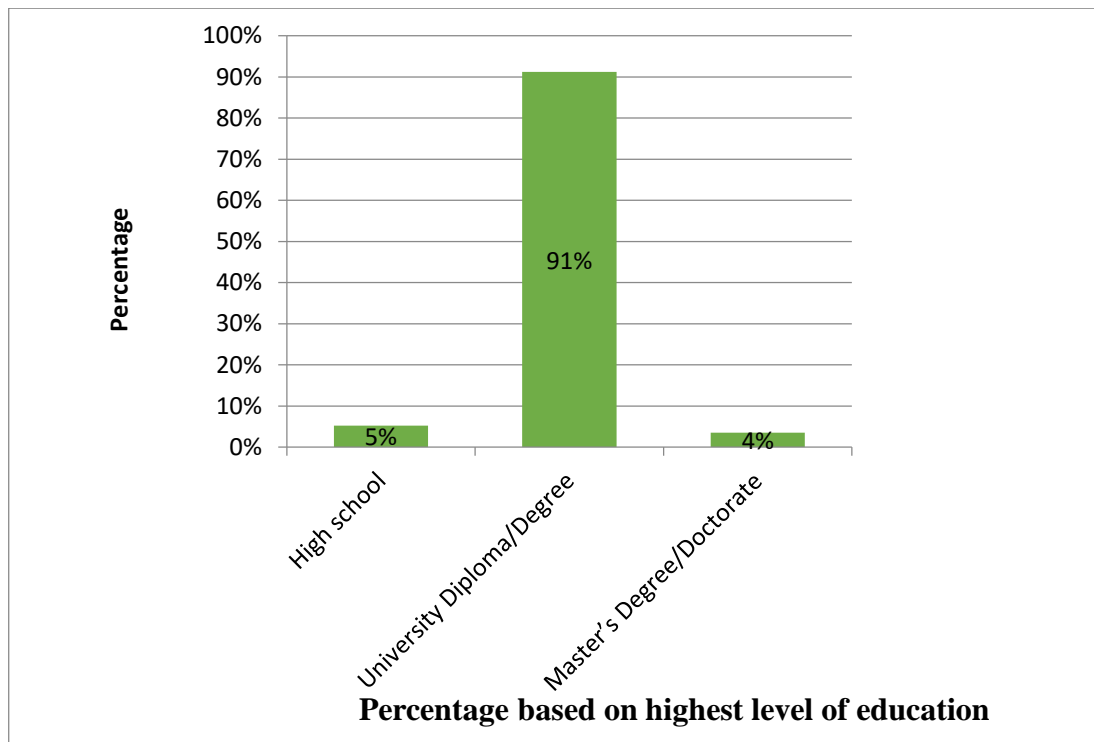


**Figure 4-4: Length of employment services**

Figure 4.4 reveals that 49.1% of the respondents have been within the employment of the college for less than 5 years as compared to 3.5% of the respondents, who have been in the employment for more than 20 years. In fact, the limited number of years for which nearly half of respondents have been in their current position may have a negative impact in the execution their SCM duties. Experienced employees, such as the 16 % of respondents who have worked at the college for more than ten years, are likely to perform better than are the newer employees. This implies that there is a mix of inexperienced and experienced workforce at the college. Knowing this could help the organisation in terms of how to go about SCM training and policy implementation.

#### **4.2.4 Highest qualifications of the respondents**

In fact, the employee's level of education may influence their performance in their work place. Education and training combined with experience are considered to have a positive impact on the success and realization of organizational goals. The assumption is that the employee will perform better in the workplace if they have a higher qualification. Figure 4.5 depicts the educational level of the respondents.



**Figure 4-5: Levels of education**

The majority of the respondents as shown in Figure 4.5 above reveal that 91.2% have a university degree/diploma. The other 3.5% of the respondents have a Masters/Doctorate degree while the other 5.3% of the respondents had only matriculation as their highest qualification. This is useful as it indicates that a fair proportion of the respondents have a higher qualification and this means that the responses gathered would have been from an informed source.

In addition, this section has discussed the biographical data of the respondents with the view that they might influence their perception of the implementation of the SCM strategy at Elangeni TVET College. The respondents' experiences and their academic qualifications might influence their understanding of how best the SCM strategy of the college is implemented.

The next section of this dissertation is concerned with the evaluation of the SCM strategy and processes at Elangeni TVET College.

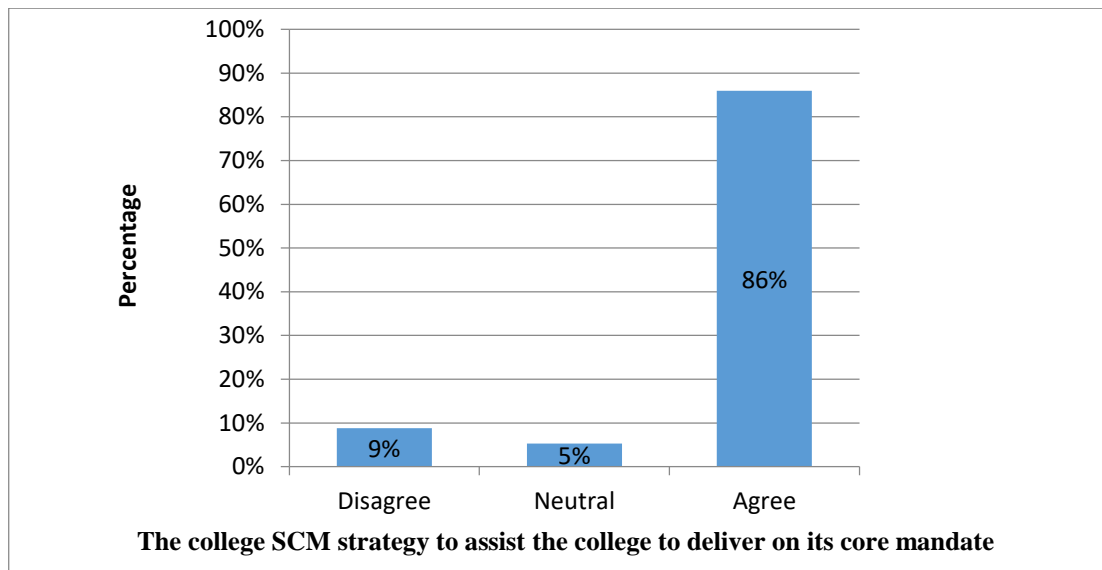
### **4.3 SCM strategy**

The discussion in this section is centred on each question across different categories of staff members who are directly or indirectly involved in the SCM processes. Therefore, the conceptual framework is in line with the first research question in this study that sought to evaluate the SCM strategy of Elangeni TVET College. However, three sub-themes were identified in this regard.

The three research themes referred to above are (1) the effectiveness of the SCM strategy of the college to deliver on its core mandate, (2) timeous delivery of goods and services to the end users, and (3) the price benefits of using SCM as a tool of procuring goods and services for the college.

#### **4.3.1 SCM strategy assists the college to deliver on its core mandate.**

According to Mensah and Tou (2013:123), controlling the performance of the purchasing function and ensuring its efficiency and effectiveness is essential to the management of the procurement process. Therefore, it is vital to evaluate how well the procurement process has gone, identify any weaknesses or problems and agree on actions to prevent similar problems in the future. Respondents were asked if the SCM processes help them to deliver on the core mandate of the college. Their perceptions are shown in Figure 4.6.

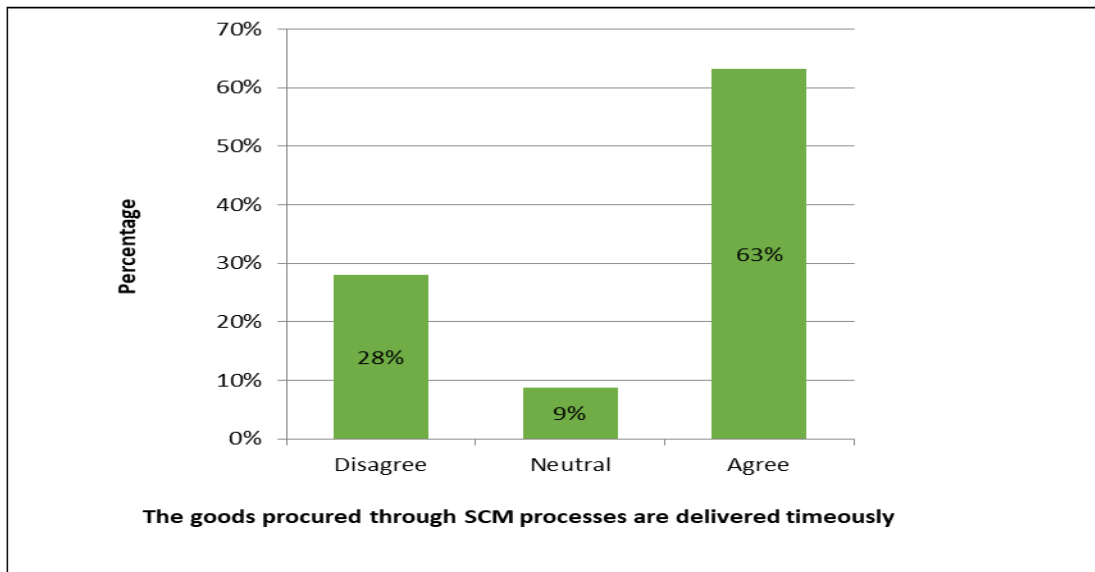


**Figure 4-6: The College SCM strategy assisting the college**

The majority (86%) of those who responded to this item felt that the SCM strategy of Elangeni TVET College does assist the college to deliver on its core mandate of teaching and learning, while only 9% of the respondents felt that the SCM strategy of the college does not assist the college to deliver on its core mandate. The remaining 5.3% of the respondents were neutral. These results are useful because they indicate that the majority of the staff who are directly or indirectly affected by the SCM strategy of the college are satisfied with the procurement processes employed by the college.

#### **4.3.2 Timeous delivery of goods and services procured through the SCM processes**

The researcher wanted to find out if goods and services procured through SCM processes are delivered timeously when they are requested by the end users for the fulfilment of their day-to-day duties. This is crucial for the achievement of organizational goals and objectives. Figure 4.7 provides an overview of the responses of participants to the statement.

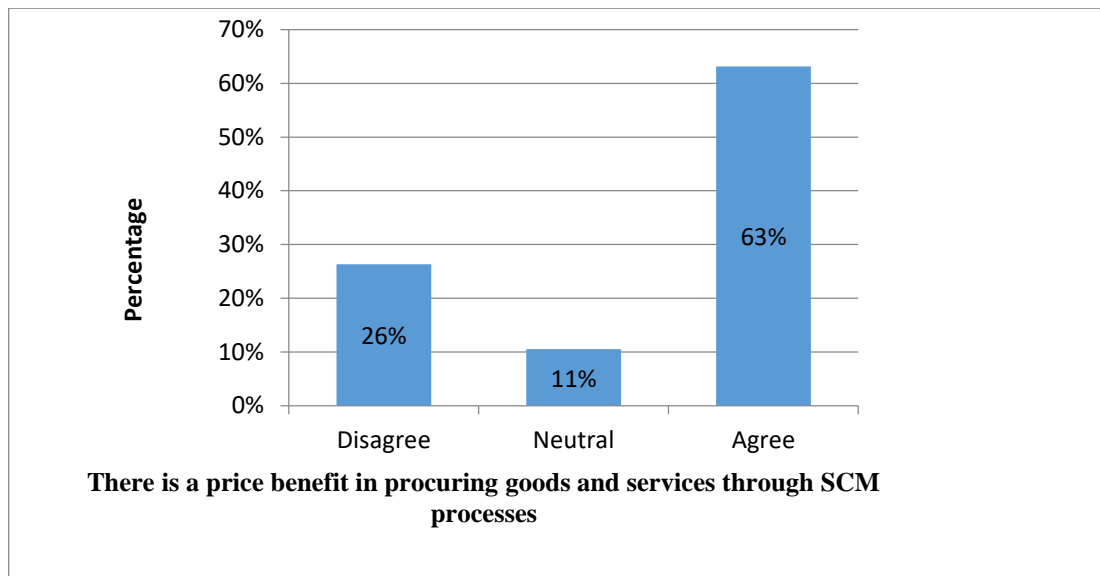


**Figure 4-7: Timeous delivery of goods and services**

More than half of the respondents (63.2%) agreed that goods and services procured through SCM processes are delivered within an acceptable period to the end user. Another 28% of the respondents disagree with this statement while 8.8% were neutral. As it is shown in Figure 4.7 above, more than 63% of the respondents are in agreement with the statement goods and services procured through SCM processes are delivered within the acceptable period. This is an indication of the calibre of the service providers who are fundamental to the delivery of quality goods and services required by the college. It is also an indication that the college selection processes of service providers who are doing business with the college are carefully selected through the SCM processes.

#### **4.3.3 Benefits in price for implementing SCM strategy.**

According to Ambe and Badenhorst-Weiss (2012), proper implementation of the six key elements of SCM ensures value for money, open and effective competition, ethics and fair dealings, accountability and reporting, and equity. This will create uniformity in procurement practices, good governance and enhancing economic development. The respondents were asked if there are any cost benefits in goods and services procured through the SCM processes. Figure 4.8 provides the summary of the responses of participants to the statement.



**Figure 4-8: Price benefits in procuring goods and services through SCM processes**

About 63.2% of the respondents agreed that there are cost benefits of procuring goods through SCM process while 26,3% disagree with the statement. However, it should also be noted that the respondents had different views about this statement as it shows that 10.5% were neutral with this statement. Again, more than 63% of the respondents felt that there are benefits of procuring goods and services using SCM as a procurement tool. This is good because it means that the college is receiving benefits through procuring using competitive quotations and bids.

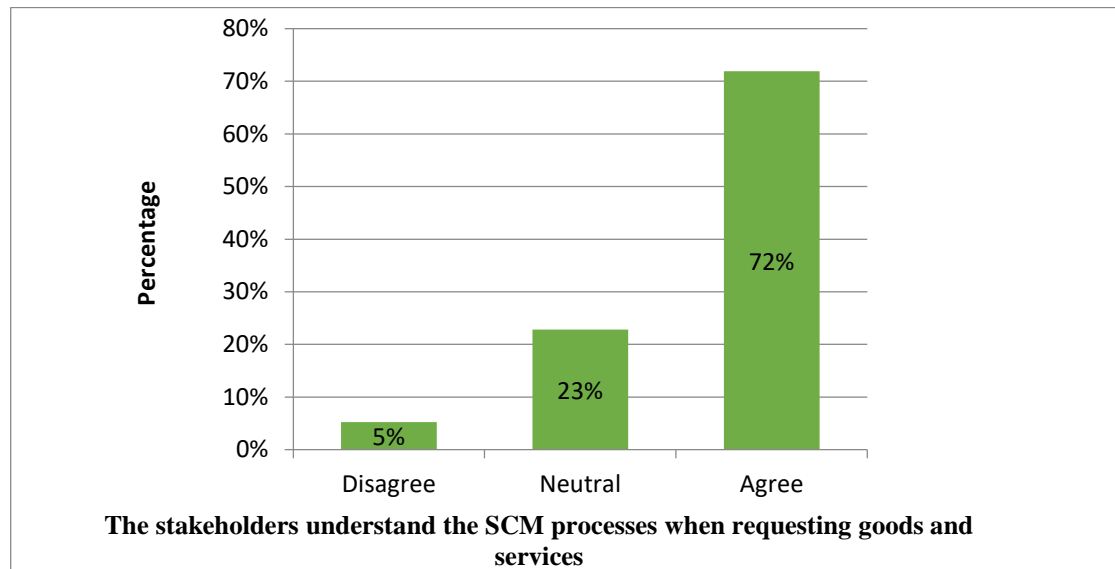
#### **4.4 Stakeholders understanding of the Elangeni TVET College SCM processes**

The second research question in this study canvassed the understanding of the Elangeni TVET college SCM processes by the stakeholders. However, three sub-themes were identified in this regard, to which the respondents were asked to respond.

The three research sub-themes referred to above were, (i) Users and beneficiaries understanding of the SCM processes when procuring goods and services, (ii) Benefits of using SCM strategy as a tool to procure goods and services, and (iii) Competitiveness in pricing when procuring goods and services using SCM processes.

#### 4.4.1 Understanding of the SCM processes when requesting goods and services

Ambe and Badenhorst-Weiss (2012: 244) argue that SCM is meant to add value at each stage of the procurement process, from the demand of goods or services to their acquisition, managing the logistics process and finally, after use, to their disposal. The respondents were asked if they understood the processes that needs to be followed when they require goods and services.

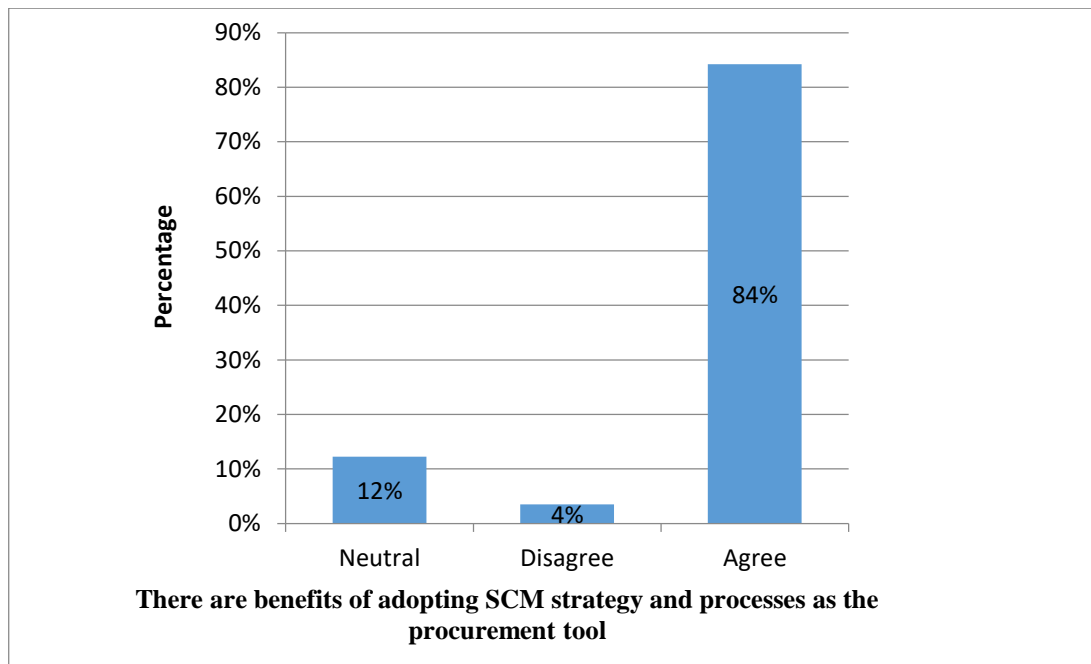


**Figure 4-9: Stakeholders understanding of the SCM processes**

The majority or 71.9 % of those who responded to this item agreed that they understand what they needed to do when they want to procure goods or services at the college. A minority (5.3%) of the respondents disagreed with the statement. However, it must also be noted that 22.8% of the respondents were neutral. This also indicates that the advocacy of processes within the college is understood by most SCM users, it also means that the SCM strategy adopted by the college is well understood. Further questions are raised as to why 23% are neutral about their understanding of the SCM processes.

#### 4.4.2 Benefits of using SCM strategy and processes as a procurement tool to procure goods and services

In this question, the researcher wanted to find out if there are benefits in procuring goods and services through the SCM processes. The perceptions of the respondents are shown in Figure 4.10 below.

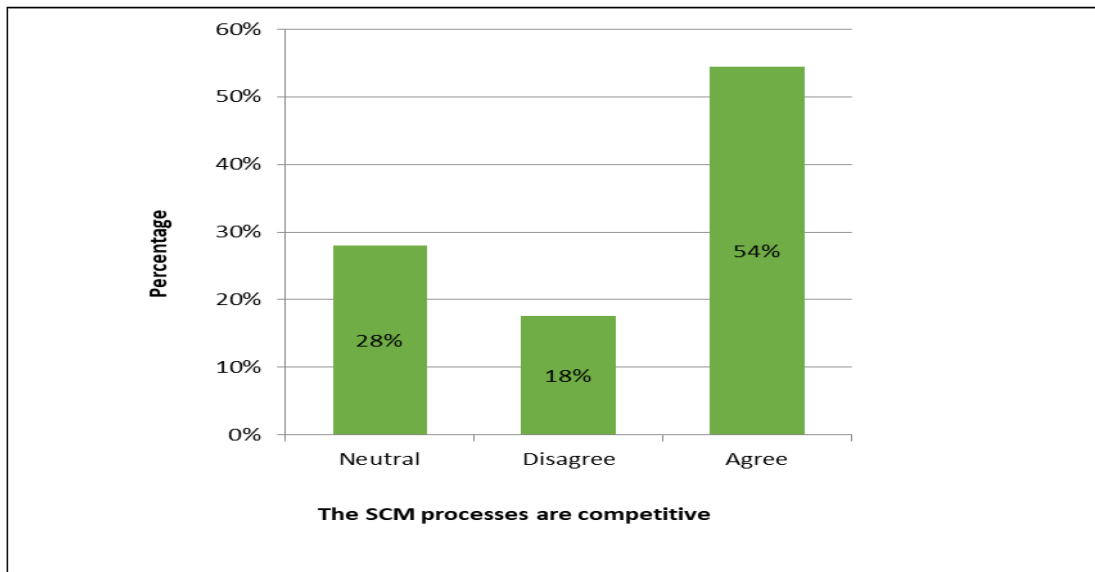


**Figure 4-10: Benefits of using SCM processes as a procurement tool**

Almost two-thirds of the respondents (84.2 %) agreed that there are benefits in using SCM as the procurement tool for the college. Only 3.5% of the respondents felt that they do not see the benefits of using SCM as a procurement tool for the college and another 12.3% of the respondents were neutral. It can therefore be deduced from the data that implementing the SCM strategies and processes as a procurement tool has yielded some benefits for the college and for the beneficiaries of the SCM processes.

#### **4.4.3 Competitiveness of the SCM processes**

The researcher wanted to canvass the perception of the respondents in terms the competitiveness of the SCM processes at Elangeni TVET College. The results are highlighted in Figure 4.11 below.



**Figure 4-11: Competitiveness of SCM processes**

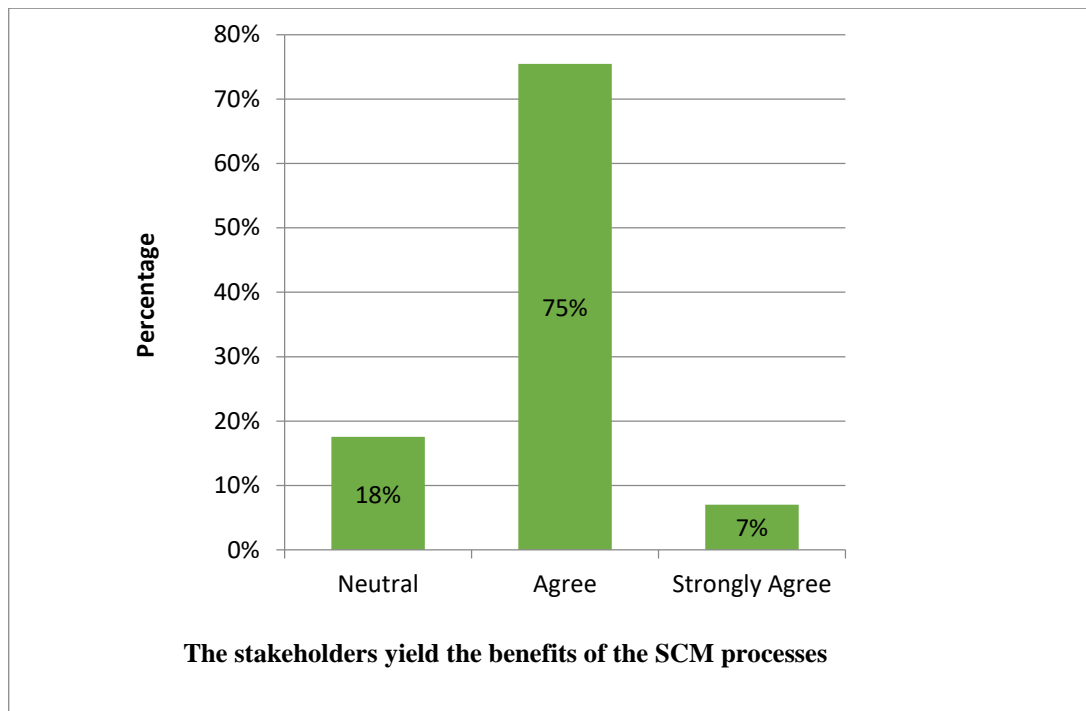
Just over half (54%) of those who answered this question agreed that using the SCM process is competitive. A small number of those who answered this question 18% felt the SCM process is not competitive and some 28.1% of the respondents were neutral. The 28.1% of the respondents may be an indication that the users and beneficiaries of the SCM processes do not check and verify the costs of their purchases, and therefore are just happy that their goods and services procured through SCM processes are delivered or rendered. This finding can also indicate the lack of transparency between the end user requesting the goods or services and the budget holder of that specific department who is supposed to closely monitor the purchases of his or her department.

#### **4.5 Factors that facilitate or hinder SCM processes**

To understand the factors that might hinder or facilitate the SCM processes at Elangeni TVET College, data were collected from the participants through questionnaire and is presented and analysed below.

##### **4.5.1 Benefits of using SCM processes**

The researcher wanted to find out from the respondents if there were any benefits in using SCM as a tool to procure goods and services for the college. The opinion of the respondents is shown in Figure 4.12 below.

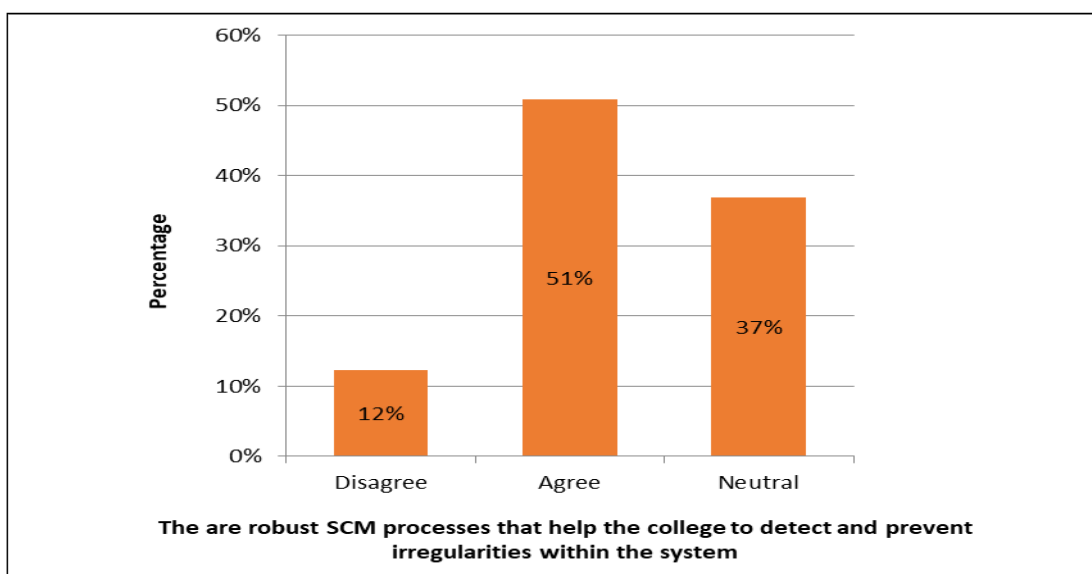


**Figure 4-12: Stakeholders' beneficitation**

The majority (75.4 %) of the respondents agreed that there are benefits of procuring goods and services through SCM processes. Only 7% of the respondents disagree with this statement. However, it must also be noted that 17.5% of the respondents were neutral. A split of 75.4 % versus 7% was noted regarding the general benefits to be accrued by stakeholders at the college, with the majority in agreement with the statement. The overall response to this question was very positive and these kind of responses can deduce to cost-saving benefits and speeding up processes and risking elimination.

#### **4.5.2 Robustness of the SCM processes in preventing irregularities from occurring**

The researcher wanted to get perceptions of the respondents on how robust the SCM processes of the college are in preventing irregularities from occurring. The perceptions of the respondents are shown in Figure 4.13 below.



**Figure 4-13: Robustness of SCM**

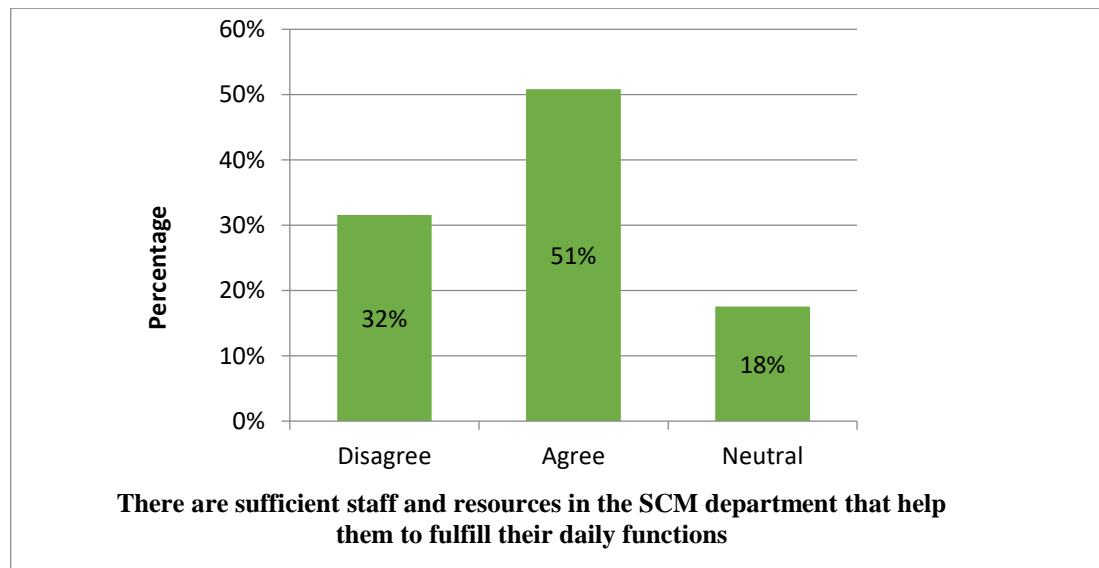
Just over half (50.9%) of those who answered this question agreed that the SCM processes are robust enough to control irregularities within the system from occurring and the internal controls in place are assisting to detect any wrong doing. Another 12.3% of the respondents disagree with the statement. However, it must also be noted that 36.8% of the respondents were neutral and that is worrying because fraud and corruption may be perpetrated by staff and service providers who are doing business with the college. This may suggest that the robustness of the SCM processes of the college is an ability to detect risk and prevent wrong doing from occurring. In addition, the Central Supplier Database, e-Tender Portal and e-Procurement opportunities on a national level reduce the administrative burden for government and business whilst facilitating robustness of SCM processes through consistencies in the system and monitoring of procurement patterns, contracts and prices (SCM Review Update, 2016:7).

#### **4.6 Competency of the SCM department**

To understand the skills and staffing capacity of the SCM and the training requirements for SCM practitioners as well as committee members who are tasked with the responsibility of evaluating all quotations and bids received by the college for procurement of goods and services, data were collected from the participants through questionnaire and are presented and analysed below.

#### 4.6.1 Staffing and resources of SCM unit

The researcher wanted to canvass the opinion of the respondents with regards to the staffing and resources needs of the SCM department of the college. The respondents were asked if there is adequate staffing and resource capacity in the SCM department to execute their daily functions. Their perceptions are shown in Figure 4.14

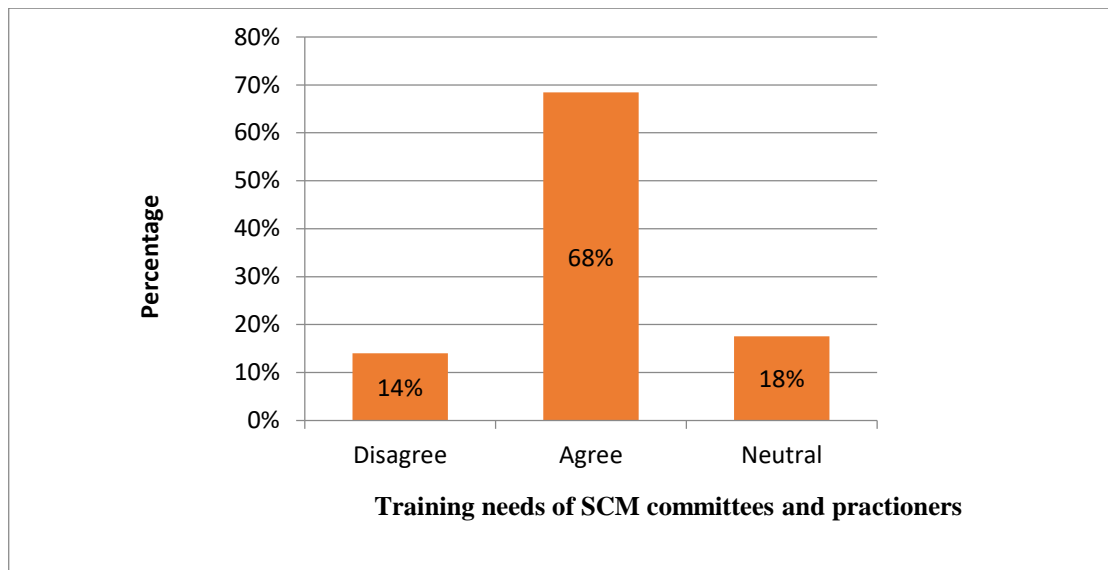


**Figure 4-14: Staffing and resources of SCM department**

Just over half (50.9%) of those who answered this question agree that the college SCM is capacitated in terms of staffing and other resources needed for them to execute their daily function. Only 31.6% of the respondents felt that the SCM unit still needs to be capacitated. A small number 17.5% of the respondents remained neutral. It can be deduced from this data that in general the SCM department's staffing and resourcing are sufficient for them to execute their daily functions.

#### 4.6.2 Training needs of SCM practitioners and SCM committee members

In this question, the researcher wanted to know from the respondents if there were any immediate training needs required in the SCM department that would assist them to efficiently do the work. The responses are shown in Figure 4.15.



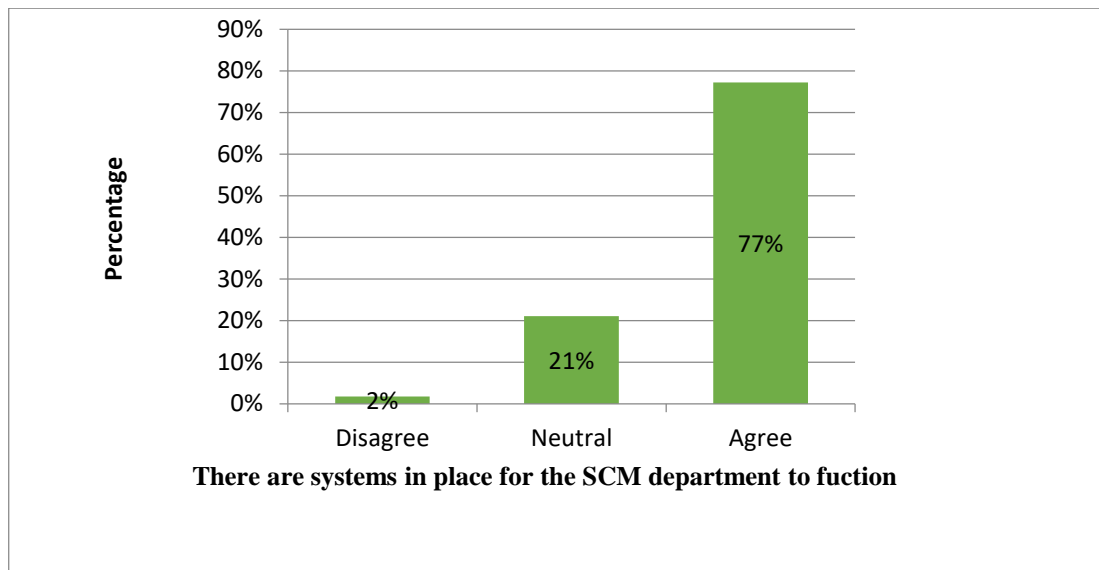
**Figure 4-15: Training needs of SCM practitioners and SCM committee members**

Almost two-thirds (68%) of the respondents agree that the college needs to provide on-going training to the SCM practitioners as well as to the SCM evaluation committee members for them to able to properly execute their functions. Only 14% of the respondents felt that they have received an appropriate training that will enable them to execute their functions. The other 17.5% of the respondents were neutral.

What was noted here is that members of the Bid committee members are not SCM practitioners and have their own functions to concentrate on. They, therefore need regular training on SCM activities and ever changing practices in SCM. This comports with McCarthy's (2006:4) point that capacity-building and knowledge are required to handle procurement processes to ensure good governance.

#### **4.6.3 Proper SCM systems in place**

The researcher wanted to find out from the respondents if they had SCM systems in place for the SCM to properly function.



**Figure 4-16: SCM systems**

The majority (77.2%) of those who responded to this question agree that the college has proper SCM systems in place to help the users to easily access the services they want. Only 1.8% of the respondents felt that the SCM systems in place are not sufficient for them to access the services of SCM while 21.1% of the respondents were neutral. This may suggest that enabling techniques and tools, such as technological systems may help to improve SCM processes.

The evidence presented in this section suggests that Elangeni TVET College has proper SCM systems in place as well as capable staff to assist the users and beneficiaries of the supply chain in the college to fulfil their day-to-day duties. The results of this section also indicate that Elangeni TVET College has implemented efficient SCM processes that help them to detect and prevent any irregularities from occurring. Up to this point, this section has focuses on presenting and analysing data. However, the following section will focus on discussing the findings of the study.

#### **4.7 Discussion**

The following section discusses the findings of the study. The discussion focuses on the four broad research questions which are informed by the conceptual framework described in the second chapter.

#### **4.7.1 SCM strategy of Elangeni TVET College**

The first question in this study wanted to evaluate how SCM strategy assists the Elangeni TVET College to deliver on its core mandate of teaching and learning. The findings of the study reveal that the government procurement strategy adopted by Elangeni TVET College does assist in delivering on its core mandate of teaching and learning. These results agree with the findings of previous studies which argue that where SCM is properly implemented, procurement may prove as a useful and effective instrument (Bolton, 2006:195).

Over two-thirds (86.4%) of the respondents agreed that the SCM strategy of Elangeni TVET College does assist the college to deliver on its core mandate of teaching and learning. These results are useful because they indicate that the majority of the staff who are directly or indirectly affected by the SCM strategy of the college are satisfied with the procurement processes employed by the college.

The perceptions of the employees regarding the implementation of SCM strategy at the college offers a valuable understanding of a situation which still demands that future research is undertaken into the matter. In addition, this case study was specific to Elangeni TVET College but the outcomes could with caution, be considered for, although not automatically generalised to, other TVET Colleges in the KZN Province. Even then it could be considered, only by those colleges, which have implemented SCM policy as a procurement tool.

#### **4.7.2 Experiences of the stakeholders in the value chain**

The second question sought to establish the experiences of the stakeholders in the value chain with regards to the SCM strategy adopted by the college. As discussed in chapter two section 2.6, that strategic partnerships with suppliers enable organizations to work more effectively with few important suppliers who are willing to share responsibility for the success of the organization (Mwirigi and Were, 2014). However, the findings of the study show that there are positive experiences of the stakeholders in the value chain of the supply chain.

These results agree with the findings of previous study by (Ambe and Badenhorst-Weiss, 2012: 254) which highlight the importance of the involvement of stakeholders in the processes of SCM. This, in turn, leads to the encouragement of public servants to be more deliberate about decisions they make. It also provides citizens as well as stakeholders with the opportunity to hold their leaders accountable (Ambe and Badenhorst-Weiss, 2012:255). It also improves the efficiency of government institutions, reduces fraud and waste of public finances, strengthens the management of natural resources and ensures better service delivery (Ambe and Badenhorst-Weiss, 2012:255).

The majority (70%) of the respondents agreed that stakeholders in the value chain understand the processes that are involved in the SCM of the college. The results are useful because they indicate that the majority of the personnel understand the processes involved in the procurement, this ultimately helps to speed up the delivery of the request of goods and services that are processed through the SCM department. This argument is also confirmed by Defee and Stank (2005:32) who find that SCM is the combination of key business processes across the supply chain for the purpose of adding value for customers and stakeholders.

#### **4.7.3 Staffing capacity and resources of the SCM department**

The final research question sought to establish if the SCM department has adequate staff and another resource capacity that is needed in order to execute its function. In addition, the findings of the study reveal that the SCM department of the college has the capacity and resources that are required for the SCM department to deliver goods and services to their customers. According to Deloitte (2013), the skills and capacity challenges are symptoms of the underlying human resource management inefficiencies in many government departments. It appears important then to address capacity constraints emanating from the apparently inadequate skills base, the lack of career modelling, the lack of skills development programmes and under-investment in technical, management and leadership skills (Deloitte, 2013).

These results confirm the views expressed the National Treasury through the annual Supply Chain Management Review of 2015, that a well-performing SCM function is important to achieving the strategic objectives and goals of any government institution.

It is further articulated that the best procurement system requires skilled, ethical and professional people within appropriate structures who actively engage in continuous improvement, innovation and learning, and who are supported by good leadership, oversight and governance (SCM Review 2015). However, the use of information technology (IT) tool in the SCM department of an entity cannot be ignored.

This is in agreement with the study conducted by Boone and Ganeshan, (2007) where they argue that where there are good processes supported by a stable IT environment. That study also indicates that, there would be a smooth flow of information and transactions from the end user until goods are delivered, and that will make the supply chain management more robust and resilient, without undermining its effectiveness.

The majority of the respondents thought that the Elangeni TVET College SCM systems are aligned to procurement processes and also user friendly and easily available. It appears that no previous study has been conducted into the effectiveness of SCM strategy at the public TVET colleges in South Africa. If so, this is understandable because TVET sector was only established in 2006 but became fully functional in 2009 after the establishment of DHET. These findings would therefore be valuable to Elangeni TVET College as well as the DHET, as they might inform the best strategies that can be used to implement SCM processes at other public TVET colleges to strengthen their procurement system especially those that have already implemented the government SCM procurement tool.

#### **4.8 Chapter summary**

In conclusion, the purpose of this chapter was to present the data, and analyse it. In addition, it presented and discussed the findings of the study. The key findings of the study have revealed that there was a general acceptance of the SCM processes within the college, and the processes are fully functional and adhered to by staff.

It is evident from this study that the SCM processes of the college are clearly understood by the SCM users and beneficiaries. It is an indication that those that are involved in the process understand what they need to do when requiring goods or services to be procured through the SCM processes. The study has shown that more than two thirds of the respondents on all questions are responded positively to the questions, which exemplifies

the confidence the SCM beneficiaries have in the SCM processes at Elangeni TVET College.

## **CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

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### **5.1 Introduction**

In this dissertation, the researcher discusses the main arguments that deal with the issue of the effectiveness of SCM strategy and processes adopted by Elangeni TVET College as their procurement tool. It is the researcher's purpose to highlight the summary of the study by pointing to the findings. However, the chapter begins by revisiting the objectives of the study, before presenting the conclusions and recommendations. In order to answer the research questions, data collection instruments were developed, tested and finalized. The collected data were then presented, analysed and discussed in chapter four. Hence, this chapter presents a summary of findings, conclusions of the study and its recommendations.

The objectives of the research were to:

- Evaluate the effectiveness of SCM strategy within at Elangeni TVET College.
- Understand the perceptions of the internal Elangeni TVET College stakeholders of the value chain regarding the SCM strategy.
- Determine the adequacy of staff and other resources that are required to deliver goods and services to its customers at Elangeni TVET College SCM department.

### **5.2 Summary of the dissertation**

The first chapter presented the purpose, introduction to the background of the study, statement of the problem, objectives of the study, research methodology and organisation of the study. In addition, the researcher further explained the reasons for this research and the research questions.

The second chapter presented a literature review based on the various sources related to this particular field of study, theories of SCM and legislative framework guiding the SCM. In the third chapter the research design and methodology were used to look into the research questions and to find answers thereto. It looked at the strategy, sampling,

data analysis, validity and reliability, trustworthiness and credibility of the data collected. However, it also explains the rationale behind the methodology used and demonstrated how the research design and methodology were applied to evaluate the effectiveness of SCM at Elangeni TVET College. The fourth chapter examined the findings of the study conducted to evaluate the effectiveness of the SCM at Elangeni TVET College.

The results of the study, in general, reveal that the SCM at the college is effective. The results also reveal that those who are users and beneficiaries of SCM at the college understand the processes in place. Lastly, the chapter summarises the study, connecting the aims and its objectives. In addition, the researcher summarises the conclusions of the study, highlights limitations to the study and makes some recommendations on issues raised. The researcher also motivates for further study to be conducted in this field.

### **5.3 Summary of findings and conclusions**

#### **5.3.1 SCM strategy of Elangeni TVET College**

The study was to investigate as to how the SCM strategy employed by the Elangeni TVET College assists in delivering goods and services required by the beneficiaries of the process, this was one of the major objectives of the study. From the research findings on this question, it is evident that the beneficiaries of the SCM processes at Elangeni TVET College are satisfied with the SCM strategy adopted by the college as a procurement tool, and they are in agreement that the SCM processes of the college are effective. It could be concluded that the college has implemented the government SCM policy as expected and the users and beneficiaries of this policy are satisfied with it.

#### **5.3.2 Experiences of the stakeholders in the value chain**

The second objective was to canvass the perceptions of the stakeholders in their understanding of the SCM processes at the college. The study established that almost 71.9% of the respondents indicated that they understand the procurement processes that they need to follow when requesting goods or services to be procured through the SCM department. The conclusion drawn from this type of response is that the college is able to advocate to the staff policies that need to be implemented, it is also concluded that the stakeholders in the value chain have good experiences of the SCM processes.

### **5.3.3 Staffing capacity and resources of the SCM department**

To determine whether the college has the necessary capacity and resources needed in the SCM department to assist the college on its role of delivering quality teaching and learning to its students was the final objective of the study. The findings reveal that, just over 50.9% of the respondents revealed that there is sufficient capacity and resources to achieve its organisational goals and objectives of delivery quality teaching and learning. However, with such a slight majority of respondents indicating sufficient capacity and resources, it is concluded that there is room for improvement in this area. It is further concluded that even though the Elangeni TVET College meets its SCM objectives and requirements, it is encouraged to ensure that SCM practitioners and officials involved in the SCM processes are continuously sent for training to update themselves on any new SCM developments.

These results also show that the SCM processes are enabling function in teaching and learning where the college can effectively contribute in promoting the vision of the National Development Plan (NDP) to capacitate and skill the youth of South Africa through education so that they can have better opportunities in life. The NDP has set enrolment targets to radically increase youth participation in TVET Colleges for them to be skilled and be ready for the employment market. It is therefore crucial to address barriers to access and to seek innovative ways to expand access to TVET Colleges. This will result in the reduction of unskilled youth and labour in general.

### **5.4 Implications and recommendations**

Based on these findings and conclusions, it was observed that Elangeni TVET College has in place the Bid Committee members appointed and SCM practitioners who are aware and understand the SCM processes of the college. It was also observed that the Elangeni TVET College has a functioning SCM department responsible for the processing of all requisitions from the different department since the Elangeni TVET College has a centralised procurement system.

The findings have important implications for the implementation of the SCM strategy in the TVET sector, as other TVET colleges in the KZN Province as well as those in other provinces in the country could consider these findings; or even replicate the study

elsewhere. For the SCM practitioners, the study may assist them to learn and adopt the similar processes adopted by the Elangeni TVET College in implementing the SCM strategy and processes. Another implication is for the SCM practitioners to attend SCM training on a regular basis so that they keep up to date with any new development within the public sector procurement processes.

Another important implication of the study is that for any policy to be implemented effectively, the staffing and resources need to be in place so that the policy would likely guarantee success. In addition, this research study could be beneficial to SCM practitioners and can also be used for self-empowerment. In fact, they may also use the recommendations made in this research for continuous operational improvement within the college. Based on the positive feedback received from the respondents, the following recommendations are made to assist the Elangeni TVET College and other TVET colleges to achieve excellence in their SCM systems:

- To improve on SCM internal controls,
- To ensure that its objectives are always achieved
- To continuously monitor the SCM system for achievement of legislative compliance at all times,
- To provide on-going training to SCM committee members and as well as SCM practitioners.

This study provided an important opportunity to advance the understanding of the SCM processes within the TVET sector. This study will benefit Elangeni TVET College in knowing that it has a sound SCM system and for it to keep on improving what is in place to serve the needs of the college. This study can be replicated at other TVET colleges for comparative findings to test implementation of SCM best practices with the aim of continuous improvement of public sector procurement processes.

## **5.5 Limitations of the study**

The research was conducted on a small scale as indicated earlier, only 60 questionnaires were distributed and 57 of them were completed and returned. An even larger sample size could have been distributed, however due to the centralised SCM system of the Elangeni TVET College, the researcher only focussed on officials who are involved in the

procurement system of the college. Although the study adopted a quantitative method, it would be interesting to further investigate the research problem by having individual interviews with the officials of the college who are involved in the procurement processes at the college.

However, the study encountered no challenges or lack of cooperation. Future studies on the current topic are therefore recommended. A longitudinal study conducted for the period of five years to check if the good Elangeni TVET College SCM strategy and processes are maintained and improved where necessary considering that the bulk of the college budget is spent through the SCM processes would be useful. Notwithstanding these limitations, the findings, conclusions and recommendations of this study are still useful for the college as well as the TVET sector as a whole.

## **5.6 Chapter summary**

In conclusion, this chapter provided a summary of the findings and conclusions of the study conducted about whether the SCM processes at Elangeni TVET College are effective. The recommendations, the limitations as well as motivations for further research, were also discussed. Contrary to the expectations, this study did not find breaches and weaknesses in the SCM processes at Elangeni TVET College. The results of the study reveal that Elangeni TVET College SCM strategy is perceived positively. The SCM processes of the college are linked to the college business strategy with the recognition that SCM forms an integral part of prudent financial management in the South African public sector environment. This research illustrates that the Elangeni TVET College SCM processes play an integral role to deliver services to the students.

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## List of Appendices

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### Appendix A: Survey questionnaire

**Topic: Effectiveness of the SCM Strategy in a TVET College: A Case Study of Elangeni TVET College.**

I am going to use the following questionnaires to gather the information about the college relating to the following critical areas of the SCM strategy:

- How does the SCM Strategy assist the Elangeni TVET College in delivering on its core mandate of teaching and learning?
- How do stakeholders in the value chain experience SCM at Elangeni TVET College?
- What are the factors that facilitate or hinder the procurement processes at Elangeni TVET College?
- Is the college SCM department capacitated enough in terms of the staff and other resources that are needed for the college to deliver on its customers?

The findings from this research will provide evidence that will translate to the degree of effectiveness of SCM strategy at Elangeni TVET College.

### SECTION A

***Briefly provide the following information which will assist the researcher to understand your background and the position you hold at Elangeni TVET College. The following questions are closed questions and they require direct answer:***

#### ***1. Biographical Information***

a) Racial group *(Tick in the appropriate box)*

<input type="checkbox"/>	African
<input type="checkbox"/>	Coloured
<input type="checkbox"/>	Indian
<input type="checkbox"/>	White
<input type="checkbox"/>	Other

b) Gender *(Tick in the appropriate box)*

	Female
	Male
	Other

c) What is your age group? (*Tick in the appropriate box*)

	18 to 25 years
	25 to 35 years
	35 to 45 years
	45 to 55 years
	55 years and above

d) What is your level of employment within Elangeni TVET College? (*Tick in the appropriate box*)

	Senior Management
	Middle management
	Junior Management
	SCM Practitioner
	Other: ( <i>Specify</i> ) .....

e) How long have you been working for Elangeni TVET College?

	1 month to 5 years
	6 to 10 years
	11 to 15 years
	16 to 20 years
	21 years and above

f) What is your highest level of education?

	High school
	Trade Test
	University Diploma/Degree
	Master's Degree Doctorate

## SECTION B

*The following statements/ questions require your opinion regarding the Effectiveness of the SCM Strategy at Elangeni TVET College.*

- *Please highlight the extent to which you Agree or Disagree with the questionnaire statement by putting a cross (X) on the number that represent your view.*
- *Please place a cross only to one answer per statement*

**1. Elangeni TVET College Core mandate**

- a) The SCM strategy of Elangeni TVET College assist the college to deliver on its core mandate of teaching and learning

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>Neutral</b>	<b>Disagree</b>	<b>Strongly Disagree</b>	<b>Agree</b>	<b>Strongly agree</b>

- b) The goods and services that are procured through SCM processes for staff and students at the Elangeni TVET College reach the end users within an acceptable time and are of good quality

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>Neutral</b>	<b>Disagree</b>	<b>Strongly Disagree</b>	<b>Agree</b>	<b>Strongly agree</b>

- c) There are benefits of using the SCM strategy for Elangeni TVET College in terms of the price the college pay for its goods and services

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>Neutral</b>	<b>Disagree</b>	<b>Strongly Disagree</b>	<b>Agree</b>	<b>Strongly agree</b>

**2. Stakeholders understanding of the Elangeni TVET College SCM Process**

- a) The stakeholders of the Elangeni TVET College who are the users and beneficiaries of the SCM Strategy understand the processes involved when they need to procure goods or services.

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>Neutral</b>	<b>Disagree</b>	<b>Strongly Disagree</b>	<b>Agree</b>	<b>Strongly agree</b>

- b) There are benefits of using the SCM strategy as a tool to procure goods and services at the Elangeni TVET College for both staff and students

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>Neutral</b>	<b>Disagree</b>	<b>Strongly Disagree</b>	<b>Agree</b>	<b>Strongly agree</b>

- c) The prices that Elangeni TVET College pays for goods and services procured through SCM processes are competitive

1	2	3	4	5
Neutral	Disagree	Strongly Disagree	Agree	Strongly agree

### 3. Factors that facilitates or hinders SCM Strategy

- a) There are internal and external factors that facilitates or hinders the SCM processes at the Elangeni TVET College.

1	2	3	4	5
Neutral	Disagree	Strongly Disagree	Agree	Strongly agree

- b) Elangeni TVET College SCM strategy benefits both staff and students who are the beneficiaries of the process

1	2	3	4	5
Neutral	Disagree	Strongly Disagree	Agree	Strongly agree

- c) The Elangeni TVET College SCM strategy is so robust that the processes that have been put in place would prevent irregularities from occurring

1	2	3	4	5
Neutral	Disagree	Strongly Disagree	Agree	Strongly agree

### 4. Competency development of the SCM department

- a) The SCM department of the Elangeni TVET College is capacitated enough in terms of staffing and other resources so that the requests for purchases from end users are attended to within an acceptable period

1	2	3	4	5
Neutral	Disagree	Strongly Disagree	Agree	Strongly agree

- b) The SCM officials as well as members of the SCM committees are well trained to execute their official duties

1	2	3	4	5
Neutral	Disagree	Strongly Disagree	Agree	Strongly agree

- c) The SCM department of the Elangeni TVET College has got the necessary systems in place that assist the department to deliver the required goods and services as expected by the beneficiaries of the SCM strategy

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>Neutral</b>	<b>Disagree</b>	<b>Strongly Disagree</b>	<b>Agree</b>	<b>Strongly agree</b>

## **Appendix B: Consent to participate**

Dear Participant

### **INFORMED CONSENT LETTER**

My name is Sithembiso Mabanga; I am a Public Administration Master's candidate studying at the University of KwaZulu-Natal, Westville campus, South Africa.

I am interested in the evaluation the effectiveness of the SCM Strategy at Elangeni Technical and Vocational Education and Training College. To gather the information, I am interested in asking you some questions. Should you have any questions or concerns about completing this survey or about participating in this study; you can contact me or my supervisor at the contact details above and quote protocol reference number: **HSS/1049/016M.**

Please note that:

- Your confidentiality is guaranteed as your inputs will not be attributed to you in person, but reported only as a population member opinion.
- The questionnaires may take 20 minutes to answer.
- Any information given by you cannot be used against you, and the collected data will be used for purposes of this research only.
- Data will be stored in secure storage and destroyed after 5 years.
- You have a choice to participate, not participate or stop participating in the research. You will not be penalized for taking such an action.
- The research aims at evaluating the effectiveness of the SCM Strategy that has been implemented at the college.
- Your involvement is purely for academic purposes only, and there are no financial benefits involved.
- I would ask that you answer the questionnaires that will be given to you. Please indicate (by ticking as applicable) whether or not you are willing to answer the questions:

	Willing
--	---------

	Not willing
--	-------------

Thank you for your contribution to this research.

Researcher's signature: .....

Date: .....

## DECLARATION

I..... (Full names of participant)  
hereby confirm that I understand the contents of this document and the nature of the  
research project, and I consent to participating in the research project.

I understand that I am at liberty to withdraw from the project at any time, should I so  
desire.

SIGNATURE OF PARTICIPANT:

DATE: .....

## Appendix C: Ethical clearance



18 July 2016

Mr SE Mabanga 204517164  
School of Mangement, IT Governance  
Westville Campus

Dear Mr Mabanga

Protocol reference number: HSS/1049/016M

Project Title: Effectiveness of Supply Chain Management Strategy in a Technical and Vocational Education and Training (TVET) College: A case study TVET College, Durban

### Full Approval – Expedited Application

In response to your application received 12 July 2016, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol has been granted **FULL APPROVAL**.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment /modification prior to its implementation. In case you have further queries, please quote the above reference number.

**PLEASE NOTE:** Research data should be securely stored in the discipline/department for a period of 5 years.

The ethical clearance certificate is only valid for a period of 3 years from the date of issue. Thereafter Recertification must be applied for on an annual basis.

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

Yours faithfully

Dr Shamila Naidoo (Deputy Chair)  
Humanities & Social Sciences Research Ethics Committee

/pm

Cc Supervisor: Dr FA Ruffin & Dr S Mutereko  
Cc Academic Leader Research: Professor Brian McArthur  
Cc School Administrator: Ms Angela Pearce

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