

UNIVERSITY OF KWAZULU-NATAL

**RISK MANAGEMENT: A CASE STUDY IN A KWAZULU-NATAL TECHNICAL
AND VOCATIONAL EDUCATION AND TRAINING COLLEGE**

By

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Master of Public Administration**

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Declaration

I, Amil Nundkumar, declare that:

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Dedication

This dissertation is dedicated to my father, Jay Ramsunder who always encouraged the values of discipline, high morality and a sound education.

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Acronyms

Acronym	Description
CEO	Chief Executive Officer
CET	Continuing Education and Training
DHET	Department of Higher Education and Training
DPME	Department of Performance Management and Evaluation
FET	Further Education and Training
FETMIS	Further Education and Training Management Information System
HE	Higher Education
HR	Human Resources
IMT	Institutional Management Team
M&E	Monitoring and Evaluation
NPG	New Public Governance
NPM	New Public Management
OM	Operational Management
PFMA	Public Finance Management Act
PQM	Program Qualification Mix
QMS	Quality Management System
SCM	Supply Chain Management
SETAs	Sector Education and Training Authorities
SM	Senior Management
SPSS	Statistical Package for the Social Sciences
TVET	Technical and Vocational Education and Training

Abstract

Technical and Vocational Education and Training [TVET] Colleges are expanded post-school education and training institutions which are vital for the delivery of education and training, and considered to be of strategic importance in and through the Department of Higher Education and Training [DHET]. Colleges afford a form of education to advance skills and expertise for industry, commerce and the country at large. This research study was located within Elangeni Technical and Vocational Education and Training College. The College is responsible for the provisioning of engineering and general studies programs on the National Qualifications Framework [NQF] levels 2 to 4, and other programs up to the national diploma level. According to the Continuing Education and Training Act 16 of 2006, Chapter 5 section 25(1)(c) regarding the financial records and statements, public Colleges need to implement internal audit and risk management functions which are not of a sub-standard nature to the requirements as set out in the Public Finance Management Act of 1999 (PFMA Act 1 of 1999 as amended). Based on the propositions of such legislation, TVET Colleges have to implement effective risk management functions. The research objective was to determine whether the College sustained “efficient, effective and clear” systems for risk management. The benefits of a risk management strategy are that it provides assistance to the organization as risks affecting business objectives are being managed, to ensure business continuity and to minimise reputational risks. Risk management is a managerial role targeted at safeguarding the organisation which includes its people and assets from physical and financial losses as a consequence of risk. Risk management at the TVET Colleges has been theorised within the paradigm of Public Administration and Governance. This study implemented the mixed methods research design and the target population for the research was the Institutional Management Team [IMT], staff and student class representatives. Qualitative data was collected through semi-structured interviews whilst quantitative data was gathered through a survey. The Statistical Package for Social Scientists (SPSS) was applied during data analysis of the quantitative data collected. Centred on the critical outcomes of the referenced legislation, the effectiveness of risk management has not been tested in the College. In conclusion, the outcomes of the research findings could be used as an instrument to contribute to ‘best’ practice in the College as well as other TVET Colleges, thereby improving processes and systems leading to the successful achievement of College and DHET objectives.

CHAPTER ONE

INTRODUCTION

1.1 INTRODUCTION

South African Colleges are vital to the delivery of post-school education and training, and are a sector of strategic importance in the Department of Higher Education and Training [DHET]. Colleges afford a form of education primarily for those who have finished secondary school or not, and those who intend pursuing vocational education or completing their schooling towards grade 12. These Colleges offer education and training to their own and neighbouring communities and advance expertise for industry, commerce and public-sector organizations and the country at large, (White Paper for Post-School Education and Training, November 2013: 11).

The College is a state entity and needs to function effectively, efficiently and economically as it ought to be accountable to the stakeholders it serves. Valsamakis, Vivian and du Toit (2010:13) refer to risk management as a management process in place to ensure that, in this case, the College is protected from physical and financial losses as a result of risks. Chapter 5 of the Continuing Education and Training [CET] Act 16 of 2006 as amended clearly stipulates that the College needs to implement internal audit and risk management functions.

Hence the College is mandated to undertake a risk management function to ensure efficient, effective and economical operations within the Technical and Vocational Education and Training [TVET] College landscape. This research study will seek to evaluate the effectiveness of the implementation of risk management processes within a Technical and Vocational Education and Training College environment in KwaZulu-Natal.

1.2 BACKGROUND TO THE STUDY

By 2002, there were 152 technical Colleges in South Africa. These then amalgamated into 50 huge multi-site institutions and were retitled as the Further Education and Training [FET] Colleges. These Colleges are now renamed Technical and Vocational Education and Training [TVET] Colleges. This new designation of Colleges expresses their main character and

landscape in the expanded post-school education and training environment. The TVET structure comprises 50 multi-campus institutions with over 260 delivery sites for education and training. Regarding the Further Education and Training Colleges Amendment Act (No. 3 of 2012), TVET Colleges are a national competency and obligation of the Department of Higher Education and Training [DHET], as emphasized in the White Paper for Post-School Education and Training, November, 2013.

As a result of the White Paper for Post-School Education and Training, Elangeni College for Further Education and Training is now termed Elangeni Technical and Vocational Education and Training College [Elangeni TVET College]. The Elangeni TVET College comprises of the following campuses:

- Pinetown Campus;
- Kwa Mashu Campus;
- Ntuzuma Campus;
- Qadi Campus;
- Mpumalanga Campus;
- Ndwedwe Campus;
- KwaDabeka Campus; and
- Inanda Campus.

The College is responsible for the provisioning of engineering and business studies programs on NQF levels 2 to 4 and has its head office in Pinetown, which is responsible for administrative matters and operational planning. It is permitted to offer 20% of its programs up to national diploma [H.E] level. Program delivery methods include full-time, part-time and distance learning, and the College sector is regulated by the FET Act 16 of 2006 as amended in 2012. The purpose of the FET Act is to:

- Stimulate FET education in the level 2 to level 4 band of qualification on the National Qualifications Framework [NQF]. This structure is above the General Education and training band and is under the Higher Education band;
- Respond to the country's labour market and community the College serves;
- Add value the country's Skills Development Strategy;
- Afford opportunities, create knowledge and the development of high level skills in keeping with academic and technical quality demands of the country;
- Create access to work opportunities and higher education; and

- Establish a co-ordinated FET system that enhances co-operative governance and offers program-based vocational and occupational training, (FET Act 16 of 2006 as amended).

Since the College is part of the South African public administration system, it is compelled to uphold the values as stipulated in Section 195 of the Constitution of the Republic of South Africa. The College is therefore, obligated to maintain a high standard of ethics and must be accountable in its decisions-making. According to section 195(1)(b), it is mandated to implement processes that are “efficient, economic and effective”. It is the responsibility of the Auditor-General to assess and report on financial aspects of any state institution. This includes the College as it is an institution that is state funded, as highlighted in section 188(2) of the Constitution. It therefore, is incumbent that these Constitutional obligations of the College be analyzed during the research process.

1.3 RESEARCH PROBLEM

The Technical and Vocational Education and Training [TVET] College sector is characterised by poor pass rates and the inability to achieve key strategic College outcomes. With billions of rands being invested in the TVET College sector, there is a perception that these Colleges are unable to meet the skills development demands of the country. The problem has been further exacerbated by the public service not receiving due consideration regarding risk management according to the Public Service Commission (2003:i).

According to the CET Act, Chapter 5 section 25(1)(c), and regarding the financial records and statements at public Colleges, Colleges need to implement internal audit and risk management functions which are not sub-standard to the standards set out in the Public Finance Management Act of 1999 [PFMA] (Act 1 of 1999 as amended).

With regard to the PFMA, section 38(a)(ii) and under general responsibilities of accounting officers, in this case the College rector, the rector must ensure that he/she sustains efficient, effective and clear systems of internal control, financial management and risk management.

Based on the propositions of the CET Act and the PFMA, Colleges have to implement risk management functions. The question is to determine whether the College sustains “efficient, effective and clear” systems for risk management. Risk management, therefore, is a pertinent

focus area that warrants attention for the College, and through this research study, it is hoped that the necessary attention would be focused on this important strategic aspect.

1.4 RESEARCH QUESTIONS

The framework of this research project will be guided and determined by the following research questions:

- Did the College create the control environment for risk management?
- Does the College have risk identification strategies in place?
- How does the TVET College assess risks?
- Are risk control mechanisms implemented?
- What monitoring mechanisms are applied to measure risks?
- What is the extent of risk reporting in the College?

These questions will determine the effectiveness of risk management implementation and whether the College sustains “efficient, effective and clear” systems for risk management.

1.5 RESEARCH OBJECTIVES

The objectives of the research endeavour are to:

- Establish whether the risk management environment was enabled;
- Examine the implementation of risk identification;
- Detect mechanisms to effectively assess risks;
- Identify risk control strategies to minimise or eliminate operational risks;
- Investigate monitoring mechanisms to evaluate risks; and
- Analyze strategies to effectively report on operational risks.

Through the achievement of these objectives, this case study aimed to assess whether the TVET College effectively managed its operations and fulfilled its governance obligations. In so doing, the research study examined the extent to which the College was abiding by legislative requirements in order to implement an effective risk management strategy, thereby realizing its strategic mandate in serving its communities effectively and efficiently.

1.6 LITERATURE REVIEW

The DHET Minister's performance agreement obligates the minister as follows: "To develop a skilled and capable workforce to support an inclusive growth path", www.thepresidency.gov.za Based on this mandate, the implication for all TVET Colleges in the country is to respond to the DHET Minister's strategic Higher Education and Training [HET] outcome.

Effective College operations are focused on the following 5 critical areas of TVET activities:

- Academic Program Expansion – which aims to develop an institutional curriculum that is receptive to the needs of the market and is able to adjust rapidly to the varying skills requirements in the country with an emphasis on artisan development;
- Throughput ratios of students - targeted at increasing the quantity of trained youth by intensifying access to education and development for the youth;
- Workplace experience for students – to grow the amount of students coming into the workforce once their training is accomplished;
- Institutional capacity building – ensuring that capacity is built for College education and training institutions aimed at effective provisioning of learning; and
- Monitoring and evaluation of College operations – a mechanism to advance the value of teaching and learning provisioning as contained in the White Paper for Post-School Education and Training, (2013:4-10).

The research study therefore, analyzed the College strategic plan to ascertain if there is a risk strategy in place. It assessed if the College has identified risks that may impede the realization of these key activities which is in accordance with the DHET strategic outcomes. The College strategic plan was examined to ascertain if the College has aligned itself with the DHET Minister's outcomes for FET Colleges concerning risk management.

The fulfilment of relevant legislative requirements was analyzed. Relevant public sector legislation like the Continuing Education and Training Act and the PFMA was referred to in order to determine if risk management is a dedicated function, as found within such legislation, which the College needs to subscribe to in upholding accountability, in order to ensure that it functions optimally, as required by such legislation.

According to the PFMA and relating to section 51(1)(a)(ii) regarding the general duties of accounting authorities, these authorities must ensure that the public organisation has and

sustains well-organized, effective and clear systems of internal controls, financial management and risk management.

Governance obligations of the TVET College necessitate the College council to decide on the College's risk level and risk appetite in pursuit of its growth and opportunities. As a result, council must allocate the risk management responsibility of significant risks to specific individuals, (Handbook for Public FET Council Members, 2007:31). However, in terms of Chapter 5 of the Continuing Education and Training Act of 2006 and the PFMA, "the accounting officer must ensure that there is effective, efficient and transparent systems of financial and risk management". In the case of the College, the accounting officer is the rector. This indicates that there is dual responsibility of risk management, one of oversight from the council and the other of the ensuing function from the rector.

The benefits of a risk management strategy are that it provides relief to the senior management, as risks affecting business objectives are being managed, to ensure business continuity and to minimise reputational risk. The risk management policy ensures that the management's approval of risk tolerance is aligned with operational objectives, a view held by Blunden and Thirwell, (2010:27). It stands to reason that risk management must be part of the overall operational and functional activities of the College.

According to Fourie and Opperman (2011:419), risks may arise from one or more of the following areas:

- Operational;
- Strategic;
- External;
- Physical; and
- Financial areas.

The risk management policy must therefore, ensure sustained implementation of the risk management program which, *amongst other factors*, supports balance sheet protection. The policy must provide an effective reporting system to ensure risk reporting. It must support a culture of risk assessment and risk management asserts Fourie and Opperman, (2011:420).

Before any management of risks takes place, the source of the existence of risk must first be identified. Sometimes it is evident and sometimes it might require more insight. Risk

identification has two related activities. *Firstly*, risks affecting the organisation must first be identified, which incorporates hazard identification and exposure identification. *Secondly*, the identification of risks is followed by risk analysis. Hazards, risk factors, exposure, risk origin and their interactions must be implicit, in the view of Valsamakis, *et al.* (2010:15).

According to the Public Service Commission [PSC] (2003:9), the risk management process is a mechanism for an “effective risk management framework”. It models itself according to the following risk management framework:

- Establishing the risk management context – evaluating the risk management enabling environment;
- Risk identification – risk consequences and circumstances;
- Risk analyses – classification, characteristics and risk prioritization;
- Risk treatment – accept, transfer, insure or avoid risks;
- Risk control – contingency planning and risk elimination; and
- Risk reporting – timeous and accurate reporting of risk exposure.

It follows then that various techniques are implemented in the risk management process, which considers the type of services that are delivered as well as the abilities of personnel performing risk management functions. The PSC makes reference to strategic and operational risk analysis. Strategic risk analysis comprises ‘SWOT’ analysis and ‘PEST’ analysis. ‘SWOT’ analysis takes into consideration the “strengths, weaknesses, opportunities and threats” to which a department is exposed. The output of this analysis informs future strategic decisions. ‘PEST’ analysis relates to the exposure to “political, economic, social and technological” risks. Operational risk analysis determines “the levels of investment in certain programmes of a department” in order to advise on operational resolutions. Examples of operational risk analysis techniques include “Nett Present Value [NPV], Internal Rate of Return [IRR] and Cost-to-benefit analysis”, as opined by the Public Service Commission (2003:15-16).

The above discussion on the theory of risk management was used to locate the context of the study, and to determine the efficacy of risk management implementation at the TVET College concerned.

1.7 THEORETICAL FRAMEWORK UNDERPINNING RISK MANAGEMENT

Risk management is a managerial role targeted at “defending the organisation which includes its people and assets from physical and financial losses as a consequence of risk. The process of risk management concerns planning, co-ordinating, and directing risk control activities in the organisation”, as outlined by Valsamakis *et al.* (2010:13).

Based on the discussion in the preceding paragraph, risk planning plays a vital role in the risk management process. Risk planning involves the extent to which the College had planned in undertaking the risk assessment, what resources were in place, which people were involved in the process, what timeframes were in place and how the risk plan was communicated. The risk management process focused on six critical activity areas, and in order to operationalize the risk process. The following key elements were analyzed through the study:

- Risk management environment;
- Risk identification;
- Risk assessment;
- Risk control;
- Risk monitoring; and
- Risk reporting.

These elements are briefly discussed below to gain clarity on the processes of risk management within the context and operational functions of the College.

Risk management environment analysis needs to be conducted to ensure whether the enabling elements have been established for the risk management process to be implemented. According to the Public Service Commission (2003:9-11), the control environment for risk management implementation consists of risk management policies and procedures, the risk organisational structure, roles and responsibilities, the determination of “risk appetite”, risk budget, defining of risk tolerance levels and the scope of risk management as critical requirements in establishing the context. Berg (2010:82) concurs that this is an enabling process which assists in understanding the environment in which the organisation functions. Reference is made to the impact of the external environment, the organisation’s culture and the strategic context on risk management. The research study endeavoured to find out whether the above factors have been considered in establishing the control environment.

Risk identification is a process that provides the underpinning context for effective risk management. This process must identify risks at all structures of the organisation, current as well as emergent risks that will impact on the organisation. The Chartered Institute of Management Accountants (2002:26) goes further to recommend that the organisation's business, culture and structures must be critically considered to correctly identify risks. The research study endeavours to establish whether the TVET College has identified risks in its key activity areas, such as academic program expansion, student throughput ratios, student placement for experiential training, institutional capacity improvement and monitoring and evaluation of operations. According to the PFMA, it is incumbent on the accounting officer of the College to identify systems of internal control, financial management and risk management.

Risk assessment involves the process in which the organisation can determine how it is doing regarding risk exposure, how it controls these risks, as well as how it monitors the risks. Improvement processes must be identified with the relevant personnel to carry out these actions is the view of Alexander, (2003:248). The assessment process can be a narrative process of bringing managers together to discuss risk exposure and gaps in the risk management process. Based on this, the study aimed to establish if campus and unit managers of the College jointly assessed operational risk by analysing external and internal College environmental factors. Internal factors influencing risk can comprise aspects such as internal staffing capacity to deliver on operations, financial capability and the physical infra-structure capacity of the College to deliver the strategic objectives. Some of the external factors affecting College risk are business partnerships, the political landscape of the region as well as external funders and donors. The research process endeavoured to analyze if the College considered such internal and external risk variables in the risk assessment phase.

Risk control looks at how an organisation sets out to accept, avoid or mitigate the operational risk, as alluded to by Valsamakis *et al.* (2010:17). Some control measures include management oversight roles, the introduction of policies and procedures and other monitoring processes. Best practice implementation is also a control measure as practised by organisations. The financing of potential risk is a factor in the process of risk control. Engineering controls, such as the purchase of machinery, is an aspect that the College could have considered to control risks. This is relevant since the College undertakes skills training in engineering facilities. An example of documentation that can play a role in risk control is the College Health and Safety Policy. Hence, the research examined the extent to which the

College implements some of these control measures as important determinants for efficient and effective service delivery.

Risk monitoring, according to Young (2006:114), requires regular supervision and management activities like qualitative and quantitative assessments of the risk exposure. It also looks at the efficacy of control measures and whether there are changes in the organisation with regard to business processes which inherently affects the level of risk exposure in that area of operation. New business processes are an opportunity to identify new risks. Risk indicators are a method of supporting risk measurement and risk monitoring, (Alexander, 2003:250). Therefore, risk measurement quantifies the level of risk exposure. Each College business unit and function thereof, has a measure of risk, which indicates severity levels. Risk measurement and monitoring eventually brings about a revision in decisions. This necessitates the allocating of resources for a particular course of action to manage the risk, as pointed out by Valsamakis *et al.* (2010: 18 - 19). This can be illustrated by the College reflecting whether safety gear has been allocated to students who undertake skills courses in the workshop environment.

Risk reporting is a process whereby the reporting of risks occurs internally to the organisation. Reporting information must be accurate and concise so as to ensure effective resolutions on risk control actions, as asserted by Young (2006:100). In the case of the College environment, unit managers and campus managers are responsible and accountable for an operational area. College operations include finance, human resources, administration, student support services, curriculum, quality management, supply chain management, campus management and management information systems. Risk reporting therefore, will emanate from these areas, as this pertains to the core business of the College. The research endeavoured to establish how and in what format risk reporting is undertaken in the College.

These key processes were used as the guiding instrument to test risk management implementation in the College. The risk management elements formed the core aspect of the research to test the degree of alignment between the TVET College risk management practices with those of the best practice processes leading to a determination of the effectiveness of risk management implementation at the College.

1.8 RESEARCH SIGNIFICANCE

Centred on the critical outcomes of the FET Act, the effectiveness risk management has not been tested in a further education and training College environment in KZN. This case study could therefore, be used as an instrument to contribute to ‘best’ practice in KZN, and the findings could be used by other Colleges nationally in a longitudinal study to improve business operations against the strategic goals of the TVET Colleges concerned. The case study aimed to ascertain if the College is implementing a progressive risk management strategy in accordance with standard practices, as may be found in the corporate sector. During the research process, gaps in the risk management process of the College was identified and a comparison was made regarding the effectiveness of the College’s risk management function compared to standard best practices, which encompass the following elements:

- Risk management environment
- Risk identification;
- Risk assessment;
- Risk control;
- Risk monitoring; and
- Risk reporting.

From these typologies, it can be seen that “risk management is a managerial function intended at guarding an organisation, its assets, people and profits against financial and physical repercussions which could affect strategic processes of the organisation” as emphasized by Valsamakis *et al.* (2010:17).

1.9 RATIONALE

This study was the first one to be undertaken at Elangeni TVET College as a research endeavour which has been corroborated by the College rector, (Annexure A). The outcomes from the research project provided a means to assess the meaningfulness of the College implementing the risk management strategy. It was a mechanism to determine whether the risk strategy process assisted the College in realizing its strategic outcomes.

A study of this magnitude would be beneficial for the College as it would be able to determine the degree of effectiveness of risk management implementation. Other Colleges in the Province of KwaZulu-Natal could benefit from the opportunity of learning from Elangeni TVET College's experience in the practice of risk management implementation.

1.10 RESEARCH METHOD

The research design was a case study approach. According to Leedy and Ormrod (2005:108), the case study is a category of qualitative research where in-depth statistics are collected regarding an individual, program or institution. The purpose of a case study is to learn more about an unfamiliar or a poorly understood circumstance. In this instance, the case study was used to as a tool to understand the effectiveness of the risk management strategy in the College.

The case study enabled the researcher to learn more about the College's risk implementation strategy and if it is achieving the intended expectations. Findings from the case study will enable other TVET Colleges in the Province, and possibly nationally, to effectively implement their operational risk strategies. The case study option is selected based on the involvement of fieldwork in the institution [College] to investigate the natural circumstances of the organisation, as advanced by Welman, Kruger and Mitchell, (2008:193). Through the case study, the researcher was able to collect data through questionnaires, interviews, observations, documents and past records including the College's strategic plan, risk management plan and monitoring and evaluation reports.

The effectiveness of the risk management strategy was be based on data collected which showed the degree of implementation of the risk management plans, and how it actually impacted on the operational aspects and strategic intent of the College campuses. In a case study research design, Fox and Bayat (2007:70) refer to the case first being identified, followed by the boundaries being determined. These boundaries have been determined by the research objectives formulated, which informed the study.

1.11 RESEARCH APPROACH

A problem to be solved requires suitable forms of research namely quantitative, qualitative or a mixture of both. The nature of the research problem is a characteristic that can influence the choice of the research approach or paradigm, as emphasised (Fox and Bayat, 2007:66). According to Robbins and DeCenzo (2005: 39), the quantitative approach includes the applications of statistics and computer simulations. Quantitative research is more useful where variables need to be counted, making use of statistics to process and explain data collected (Fox and Bayat, 2007:7). The field of statistics incorporates descriptive [methods collection, tabulation and summarization of data] and inferential [reaching conclusions and estimates] methods, is what Levine, Ramsey and Smidt maintains, (2001:2).

On the other hand, qualitative studies are applied in the description of communities, groups, and organisations, is a view held by Welman, Kruger and Mitchell, (2008:188). Qualitative research will scientifically describe people, events and aspects related with them where it is not dependent on numerical data. Sometimes, it is problematic to make a strong distinction between the two approaches and therefore, research could be a combination of the two approaches which is referred to as the mixed method.

Therefore, this study implemented the mixed methods research approach which combined qualitative and quantitative data. Creswell (2014:219) says that the researcher “collects both the qualitative and quantitative data and analyzes them separately. The researcher then compares the results of the findings to confirm or disconfirm each other.” This approach provides different types of information. In this case, qualitative information was generated from the interviews, whilst quantitative data emanated from questionnaires. Importantly, both data sets should yield the same results.

Through the qualitative research approach, the researcher endeavoured to find out the nature of certain situations, processes and relationships. In this case, the research was to determine the degree of effectiveness of the College risk management strategy. This entailed analysing the process effectiveness of risk management and to what degree it contributed effectively to other management functions in the College environment. Is the risk management strategy a “living” document in College processes? One could look at the relationships between different structures of management and how each layer of management responds to the risk strategy. This study was an explorative process of investigation. Interpretations were made to gain insight into risk strategy implementation, which included a quantitative description of

opinions, trends and attitudes of the College population being sampled. The mixed methods design has an advantage in that the weaknesses of the both quantitative and qualitative data collected could be neutralized, (Creswell, 2014:15).

1.11.1 Research Approach Philosophies

A specific research design may involve “philosophical assumptions or worldviews.” Such worldviews influence the research process. The term “worldview” relates to a set of beliefs that guides research action, as expounded by Creswell (2014:5). Examples of worldviews are:

a) The Positivist Worldview

This view represents the thinking after positivism and is often called the scientific method. It is associated more with quantitative research than qualitative research. This method challenges the notion of the absolute truth of knowledge. The researcher commences the research with an established theory, then accepts or refutes the theory.

b) The Constructivist Worldview

This is a perspective or approach to qualitative research. Such theorists believe that “individuals seek understanding of the world in which they live and work.” The individuals develop subjective meanings of their experience which are varied and multiple. Such meanings develop or generate new theory.

c) The Transformative Worldview

These individuals are critical theorists or participatory action researchers, holds a view that research inquiry needs to be inter-woven with political change agendas to tackle social change orientation. Importance is placed on lives and experiences of groupings that have generally been marginalized such as race, gender, sexual orientation, ethnicity and socio-economic class.

d) The Pragmatic Worldview

This view is associated with what arises out of situations, consequences and actions. This research approach is not confined to one system of philosophy. Research inquirers draw conclusions from both quantitative and qualitative assumptions. The researcher has the

freedom of choice in methods, tools, techniques and research techniques to best suit their needs. The pragmatic approach is problem-centred, and occurs in social, political, historical and other contexts.

Drawing from the above, this research approach used the mixed methods, and was underpinned by the Pragmatic Worldview Philosophy as a situation was investigated and conclusions were deduced through the use of quantitative and qualitative data.

1.12 STUDY SITE

The study was conducted at Elangeni TVET College in KwaZulu-Natal. It consists of 8 campuses which are spread within the eThekweni Metropolitan region as Pinetown, Mpumalanga, KwaMashu, Ntuzuma, KwaDabeka, Inanda, Ndwedwe and Qadi Campuses.

The head office is situated in Pinetown which is about 20km north east of Durban; this is where all the interviews will be conducted. The campuses were visited where questionnaires were distributed to another part of the sample population to ascertain whether recommendations as set out in the Risk Assessment Management Report were currently being implemented. The College has a student population of 6500 and 450 staff comprising management, academic, administrative and general assistant personnel, (Elangeni TVET College Strategic Plan: 2014 – 2019:8).

1.13 TARGET POPULATION

According to Welman, Kruger and Mitchell (2008:53), the target population is the complete collection of cases from which a sample is extracted. Fox and Bayat (2007:52) refer to populations as groups of events, individuals or objects which have a common characteristic which will represent the total sum of objects or individuals which will be involved in the research study. The target population for this research study was the Institutional Management Team [IMT], staff and student class representatives of the College. The IMT consist of the director [rector], deputy directors, unit managers and campus managers. Unit and campus managers oversee College operations.

1.14 SAMPLING METHODS

Sampling can be either probability or non-probability in nature. In the case of probability sampling, each unit or element has an equal chance of being selected or included in the sample, while in non-probability sampling, elements or units have no opportunity of being part of the sample as pointed out by Welman *et al.* (2008:56).

In this case study, probability sampling utilizing stratified sampling was used. The reason for this is that the sample comprises sub-populations or strata. The population is non-overlapping and is homogeneous regarding the investigation that was conducted, (Fox and Bayat, 2007:55). In this research, the sample consists of the different layers or structures of the College such as senior management, operational managers, staff and student components, where stratified sampling was used. An advantage of stratified random sampling is that it consists of smaller samples, thereby requiring less time and costs to conduct the investigation. However; the sampling method that was implemented to draw a sample from the staff component was random non-probability sampling. This was indicative through every staff member having an equal opportunity of being selected.

1.15 SAMPLE AND SAMPLE SIZE

According to Foster (2010:387), a sample is a sub-set of the population. Sometimes researchers have to limit their research to part of the population which is referred to as a sample of the population which is representative of the population, (Fox and Bayat, 2007:54).

The sample in this research study comprised the management, staff and student representatives of the College. Management are the personnel required in the planning for risk management, and are the implementers of the risk strategy of the College. The staff and student component are at the coal-face where risk management is effected operationally. This sample ensured a high response rate as the samples constituted of individuals that ought to exercise a greater degree of responsibility. A high response rate was based on the ability to locate and identify the participants in the study. Hence there was a greater degree of participation in the data collection process.

According to Fox and Bayat (2007:61), sample sizes depends on a number of considerations such as the population size, homogeneity of the population, as well as the degree of reliability required in the investigation, and the sampling method. Sample size is regulated by the following significant factors:

- Different analyses that will be carried out;
- Tolerable degree of error which impacts on accuracy for estimates;
- Degree of confidence in data collected; and
- Size of the total population from where the sample is being drawn.

For this research study, the expected sample size was 93 as reflected in the tables below:

Table 1.1: Population Sample - Survey

Categories	Population	Expected Sample Size
Operational Management	15	15
Staff Representation	450	50
Campus Class Representatives	190	25
Total	655	90

The above table is representative of the population sample of a survey of 90 individuals issued with questionnaires.

Table 1.2: Population Sample - Interviews

Category	Population	Sample Size
Senior Management	4	3
TOTAL	4	3

The table above represents the population sample of senior managers for the interview process.

1.16 DATA COLLECTION

For the purpose of this research investigation, the mixed method was implemented to collect data, as it incorporates qualitative as well as quantitative data. This method has an advantage as both types of data when collected can be analyzed separately: after this a comparison of the results can be made to confirm or disconfirm each other, (Creswell: 2014:219).

Qualitative data was collected through semi-structured interviews with the senior management personnel. During field work, the researcher compiled notes and tape recorded the interviews, as there could be other observations made which may add value during the data analysis process. Vithal and Jansen (2006:20) proposes that a data collection plan be generated taking into consideration data collection methods, research parameters and research instruments to be used. The interview schedule is attached as Annexure B. Semi-structured interviews were conducted where a schedule of themes and questions was generated. This option was made available to allow the respondents to freely respond to questions posed with a view of obtaining other information not requested in the schedule of questions. When trends in responses from individuals occur, this could be vital information that would not have been discovered if a structured interview option was implemented. Respondents were free to participate as the study was voluntary and they were also free to withdraw from the study if they desired to do so. However, one must be cognizant regarding time delays. Through the interview process, the respondents' thoughts, feelings and experiences were brought to the fore. These can contribute to the intensity of what is being discussed. The interviewer elicited

information from the interviewees with awareness and sensitivity to the people who were interviewed, as they expressed their feelings.

Quantitative data was then gathered through a survey. Each College site was visited where questionnaires were distributed to the operational management, staff and student components. Welman *et al.* (2008:181) emphasize the importance of being sensitive and ethical during an intervention process such as data collection. Based on this statement, the literacy levels of the students were taken into consideration as this must not be a hindrance when collecting survey data. The data collection instrument had been made simple to include closed questions where the respondents had a range of answers to choose from. The researcher met with the respondents in an environment where they were comfortable as they received a briefing on the research endeavor. This led to greater ease in completing the survey by the respondents. More respondents were involved in the quantitative method as opposed to the qualitative option, which produced valid data collected leading to meaningful statistical testing, highlighted by Creswell (2014:222). Annexure C, D and E represent questionnaires that were handed to the operations managers, staff and student representatives respectively.

Other forms of gathering data were used to source important and relevant College documentation which included the following typologies:

- Risk management strategy;
- College strategic plan;
- College policies and procedures;
- Monitoring and evaluation reports;
- Monthly management reports;
- Client satisfaction surveys; and
- Internal and external audit reports.

These documents focused on the themes being investigated. These documents are known sources of information of which the focus group and individual interviewees are aware. They were thus in a position to freely discuss aspects during the interview process, thereby adding to the quality of information requested.

1.17 DATA QUALITY CONTROL

Validity refers to the accuracy achieved in the findings of the study. It is the extent to which the research design and data collected allows the inquirer to draw accurate conclusions, as formulated by Leedy and Ormrod (2005:219). Qualitative reliability contributes to the relevance of the methodology to be pursued in the study. Data quality control can be achieved by analyzing the feedback from respondents in accordance with the key questions and objectives raised in the study, the findings and the use of methodological tools to gauge statistical significance. The use of formulating themes when examining evidence provides a convergence of several sources adding to the degree of validity, (Creswell, 2014:201). The researcher was cognizant of factors such as experimental procedures, treatments or the experiences of the participants that can threaten validity and may result in incorrect inferences being drawn about a population. Validity in quantitative research refers to “whether the researcher can draw meaningful and useful inferences from scores on the instrument, such as content validity”, as highlighted by Creswell (2014:160).

1.18 DATA ANALYSIS

This research used thematic analysis used during the data analysis process. Data analysis is intended to make sense of the data collected in order to gain information. During the data collection process, such as interviews and focus group discussions; field notes are made by hand and recordings are made. The notes and recordings were processed in order to generate conclusions from the information, for example through theme identification. This can be described as “umbrella” constructs where one looks for word repetitions and keywords, asserts (Welman, Kruger and Mitchell, 2008:212).

Data analysis for the research involved the organizing of details in a specific i.e. chronological order. Data was clustered into specific groups, then interpreted for statistical significance. Patterns were identified for specific themes and the overall analysis was constructed to draw conclusions. The research looked out for convergence of data which can arise during the data collection process, as noted by Leedy and Ormrod (2005:136).

The Statistical Package for Social Scientists (SPSS) was used for data analysis concerning the quantitative data collected. Reliability and validity of the data was tested using Cronbach’s Alpha and Bartlett’s Test of Specificity. Factor analysis was implemented to make credible

sense through data reduction. Kaiser-Meyer-Olkin statistical assessments were applied to test the total significance of all correlations or associations of gathered data. In order to analyze whether there was a relationship between two or more variables, bivariate correlation was effected.

1.19 ETHICAL CONSIDERATIONS

Fox and Bayat (2007:148) refer to ethical considerations as a process dealing with seeking permission or informed consent from individuals participating in the research through a process of questioning, interviews or observations. According to Welman and Kruger (1999:181), ethical considerations become very important during the following stages of research:

- During the recruitment of participants;
- During a measurement process to which they may be subjected; and
- During the process of acquiring results.

With regard to this research investigation, permission was sought from the director of the College to undertake research into the effectiveness of the risk management strategy in the College. The director was informed as to the nature of the investigation to ensure that confidential and sensitive information will not be divulged The College management which constitutes the sample for the research was informed as to what is required from them in the investigation; therefore their permission to be part of the research was sought through the form of a gatekeeper's letter. They were also be informed that for any reason should they feel uncomfortable during the research process, and if they wanted to withdraw from the process of consultation, that it was their prerogative without any prejudice. This voluntary aspect is in keeping with the University's policy for postgraduate research.

The participants remained anonymous. Their confidentiality and privacy was assured through the use of an agreement document between themselves and the researcher.

Importantly, permission was sought from the University of KwaZulu-Natal Ethics Committee, together with a gatekeeper's letter from the TVET College.

1.20 LIMITATIONS OF THE STUDY

The study is new to the College, therefore on-going liaison between the College rector and the researcher regarding the sourcing of College documents was integral for this research. Communications with the institutional managers was a significant factor, to ensure that the objectivity of the research was not compromised. As highlighted by Holloway and Brown, (2012:52), limitations are the potential “weaknesses” that may influence the results of a research.

1.21 CHAPTER FRAMEWORK

This research study incorporated six chapters which were expounded as follows:

Chapter One contains background information to the study and the context within which the research endeavour will be undertaken. The research problem is identified as well as the intentions of the research through research objectives. The research significance is emphasised and the research approach delineated. The target population and sampling methods are identified. Data collection processes are expanded on, together with how data will be analysed. Finally, ethical considerations and limitations of the study are discussed.

Chapter Two provides critical information regarding the public administration landscape. Models for public administration are described to understand the approaches to public administration and the need for effective performance and service delivery. An outline of the ‘Genesis’ of public TVET Colleges is sketched, providing the significance of College governance. The importance of planning for success and strategies for effective performance to create public value is, lastly, emphasised.

Chapter Three focuses on the literature review which encompasses the risk management model that will be elucidated to assess whether the TVET College compares to this model. However, the chapter commences with the concepts of the evolvement of leadership value and organizational strategy to the point of risk management. A snapshot of strategic management in the public sector provides a case for risk management. The model for risk management incorporating scanning the risk environment, risk identification, risk assessment, risk control, risk monitoring and risk reporting are expounded. The chapter concludes with the benefits of risk management, decision-making and the importance of ethical behaviour.

Chapter Four is the research design and provides an outline of the aim of the research. The methods and approach of the research as well as research approach philosophies are described. Information regarding the study site, target population, sampling methods, the sample and sample size are clarified. Data collection strategies, data quality control and data analysis together with ethical reflections are considered.

Chapter Five expresses the content for the research findings, analysis and discussions. The findings are supported by statistical information in the form of tables and graphs. The research instrument with quantitative data analysis is exposed to statistical reliability testing to provide an assurance regarding data quality. Biographical and risk strategy implementation data is analysed and exposed to hypothesis testing and correlation deductions. Finally, an analysis of the questionnaire and interview responses is undertaken.

Chapter Six is the final chapter which contains the conclusion and recommendations arising from the study. A critical consideration was: “Has the research problem been answered?” This was followed by analysing the implications of the research endeavour. The research study limitations and means of improvement are suggested. Critically, recommendations from the research are outlined for the purpose of sharing best practise and improving organizational operational processes.

1.22 CONCLUSION

This chapter provided insights into the framework of the research that was undertaken, and included information as to why there is a need to pursue the research. This was followed by a description of the research environment including its locality, operational function and the people associated in the research environment. There was a description on the population sample and sampling techniques implemented. The research design data collection methods and data analysis processes were briefly described. This was concluded by ethical consideration, research limitations and a brief narrative on the chapters that constitute the research study. This chapter is followed by Chapter Two, which contain a discussion on the public service landscape and how the TVET College is located within this landscape.

CHAPTER TWO

THE INTER-RELATIONSHIP BETWEEN RISK MANAGEMENT, PUBLIC ADMINISTRATION AND SERVICE DELIVERY

2.1 INTRODUCTION

“Access to decent public services is no longer a privilege to be enjoyed by a few; it is now the rightful expectation of all citizens, especially those previously disadvantaged. This is why the guiding principle of public service transformation and reform is *service to the people*”: Mr. Z. Skweyiya – Minister for Public Service and Administration in the Forward of the White Paper on Transforming Public Service and Delivery, Department of Public Service and Administration. The publication of the White Paper on Transforming Public Service Delivery (Batho Pele) in 1997, is an example of government’s commitment to acknowledging good governance by requiring officials to consider their clients as first priority, maintains Cloette and Thornhill, (2012:5).

Public administrative procedures must be implemented by government institutions aimed at satisfactory service delivery and the improved welfare of people. The three spheres of government, *namely*, National, Provincial and Local Government, provide certain services according to their priorities and its significance. Government departments accomplish their objectives by improving the lives of citizens when they successfully provide the services that they planned to undertake, as pointed out by Du Toit, Knipe, Van Niekerk, Van der Walt and Doyle (2001:4-24).

The public administration system ensures that the functions of government are facilitated so that services are rendered to its people. Some of these functions as highlighted by Hughes (2012:23) are to:

- “Provide for infra-structure – the provision of basic institutions, rules and arrangements for the satisfactory operation of a modern capitalist system [the College is supported though the provision of land and buildings, legislative frameworks, operational framework, staffing and its management and academic delivery programs to name a few];

- Provide various goods and services – goods or services that are available for the whole country but difficult for an individual to pay for such as national defence, sewage disposal, traffic control systems, roads and other infra-structure [services provided by the College are education and training functions, as well as community upliftment];
- Resolve group conflict – the need by government to resolve conflict in society in pursuit of justice, order and stability through legislation such as minimum wage legislation [legislation such as the Basic Conditions of Service and the Continuing Education and Training Act are examples of legislation provided by government which enhance stability and order within the College environment];
- Protect the natural resources – thereby preventing the wasteful use of natural resources and the protection against degradation of the natural environment;
- Create minimum access by individuals to goods and services of the economy – social assistance by government to overcome the negative impact of the market which might be socially unacceptable that could cause poverty, illness and unemployment as examples [this is supported by College bursary function which aids those who are needy and impoverished]; and
- Stabilize the economy – actions that to be taken by government to overcome the negative impact of the economy such as a recession through, for example, budget and policy adjustments.”

The above functions of the College through government are common across most countries as facilitated through the public administration system, but the public manager is personally responsible to deliver the results in the form of service delivery. The rector, as the accounting officer, is obligated through performance agreements with DHET to ensure that the mandate to create a skilled workforce is fulfilled by rendering effective and efficient teaching and learning services to its client.

Fox, Schwella and Wissink (1997:2) describe public administration “as a system of structures and processes which operates within a particular environment with the objective of facilitating the formulation of appropriate government policy and efficient execution of the formulated policy.” This definition provides a wide scope of public administration as the environmental context considers policy formulation, policy execution, politics and management processes that affects the College.

The “environmental context” as alluded to by Fox *et al.* (1997:18-20) consists of:

- The general environment – everything that is exterior to the organization or the “macro-environment” which impacts on the organization continually, such as the communities the College serves and its partnerships with other organizations;
- The political environment – this includes political ideas, philosophy, and political ideology constituting the political system. The College as a public institution is subjected by national power structures like DHET, interest groups such as unions, TVET regulations and political authorities;
- The economic environment – this relates to the way society generates and distributes its wealth. Economic philosophy is the foundation for international and national economic structures and developments. This is represented by the College receiving development funding from various countries where their project delegate monitors the College regarding its fulfilment on the conditions, as set out in a memorandum of understanding;
- The social environment – this is concerned with the inter-relating social roles and institutions within a specific society which comprise the demographic characteristics of the population, urbanisation trends, education, housing and human development which needs contemplation by policy-makers;
- The cultural environment – this comprises society’s attitudes, beliefs, interactions and role definition which is an influence by which society transfers its belief structure. The cultural structure of family, educational institutions and religious institutions transmit cultural patterns which originate from the communities the College interacts with and the students it serves; and
- The technological environment – this refers to how technology and machines are used to produce and allocate goods and services. The College must manage within the changing technological *milieu* and its influences such as implementing “cloud technology” and improved communication devices, for example tablets and Internet solutions.

Based on the above, the College rector, who is a public official, must be cognizant of the influences of the environmental context when executing the public administrative functions as this becomes the foundation for development and the appropriate approach to public administration and management, as advocated by Fox *et al.* (1997:23).

Public administration can be analyzed by looking at various approaches such as the following:

- Process approach;
- Multi-disciplinary approach;
- Open systems approach; and
- New public management approach.

A contextual discussion of these approaches follows.

Process approach – is categorized by administrative, functional and auxiliary processes which to be undertaken in order to achieve government’s goals to deliver on services to the citizenry. This approach is evident in the College through the various business units like human resources, administration and finance; to name a few, that support the College’s core function of teaching and learning as a service delivery function.

Multi-disciplinary approach – highlights the use of knowledge from other disciplines such as political science, economics, legal sciences and psychology as disciplines that contribute to the public administration system. The College’s administration system is enhanced by the establishment of a College council and its sub-committees such as procurement, audit and risk and planning and resourcing. These sub-committees are constituted by individuals, who are specialists in their respective fields of disciplines and who bring new business knowledge to the College.

Open-systems approach – this approach to public administration emphasizes that it occurs in an environment, noting how aspects of the environment can affect the public administration system. It is represented through the participation of key role-players, like members of the community who interact with the College system to influence its strategic direction resulting in the development of this community.

New Public Management approach – is the new theory of public management, indicating a change as to how the public administration needs to be governed. It emphasizes the aspect of “contractualism”, where in a state, the personnel and resources are to be managed by a series of contracts. The contract clearly outlines the objectives and tasks to be performed in order to achieve the desired outcomes of service delivery. Such contracts are the responsibility of executive officials of the state, as acknowledged by Du Toit *et al.* (2002:28). This is representative of the College “contracting” its staff through job descriptions and performance

management mechanisms. The College has implemented service level agreements and memoranda of understanding with various organizations in partnerships, to aid in its development to render improvement services to its main client, the students.

The systems of approach regarding public administration consider a certain environment in which it is implemented within the College. Functions in the public administration system are exposed to threats or challenges which affect its successful implementation, thereby having a negative impact on College operational outcomes. These negative impacts are circumvented through a risk management system which the researcher envisages investigating regarding its implementation and effectiveness.

2.2 PARADIGM SHIFTS IN PUBLIC ADMINISTRATION

Developing countries have been drawing on the general experience of public sector reforms and specifically public administration reforms from progressive and innovative countries. These public sector reforms looked at new frameworks of public administration which reflected a change from the “Old Public Administration” to the “New Public Management” and progressing to the “New Public Governance” approach, as pointed out by Robinson (2015:4). In spite of these approaches being distinctively associated to one another, there are different views about these concepts by academic followers. The traditional, managerial as well as the governance models of public administration are viewed as influences contributing to public service delivery, as emphasized below:

- **“Traditional” Model of Public Administration**

The traditional model of public administration was once a major reformation of public administration. It is based on two theories, *namely*, the theory of bureaucracy and the separation theory between politicians and administrators. It was characterised by the political leadership having control through means of bureaucracy and hierarchical structures, and motivated by the public interest serving party interests. The administration implemented policies as decided by the politicians. Such characteristics of public administration are now seen as out-dated and “old fashioned” and not relevant to the changing world, (Hughes, 2012:44). At the same time, Max Weber set about the theory of bureaucracy where the public administration is distinct and professional, where people are recruited and appointed on merit

and where the system is politically neutral in spite of changes in government. Weber asserted that there is no other authority but the law that the position held by an administrator was part of that authority, and that the organisation has rules and that these rules are more important than any individual.

As can be observed, there is basically no emphasis on the human factor here or the rights and welfare of the citizen. The emphasis was on authority, structure and the supremacy of the organisation. The “one best way” placed emphasis on standardized practices and procedures, where administrators had no responsibility for the results. Bureaucracy was seen as a system of power despite there being the greater need to improve system efficiencies. Through interrogation of these theories, it is clear that nowhere is it mentioned that the need for service delivery to the citizen, adds value to society. The emphasis was on processes rather than on the results. In the traditional model of public administration, there were no dealings with external organisations or the public by administrators, (Hughes, 2012:78). However, Runya, Qigui and Wei (2015:11) point out that this model of public administration significantly improved the effectiveness of work during that period.

- **Managerial Model of Public Administration**

Robinson (2015:7) advises that based on the limitations of the old public administration model in meeting the demands of a changing economy, the New Public Management [NPM] Model was introduced. The traditional model of administration was widely perceived as not working very well. There was a push towards being results driven as opposed to having an emphasis on processes. There was pressure on governments to deliver more functions with the same resources. Changes in government brought about changes in the management of activities and functions. The managerial change came from the political leadership and not the public service itself, (Hughes, 2012:80).

Some of these changes were to recruit specialist staff like economists and managers and applied private sector practices in the public service with the aim of improving functions and cutting costs, thereby improving productivity. Public management now started looking at long-term goals, as well as developing relationships with external stakeholders. This managerial model focused on strategy development [development of objectives and work plans], the management of internal components [resource allocation and procedure development] and lastly, the management of external institutions/units [dealing with other

departments and organisations]. This new model of public management was referred to as “managerialism”, market-based public administration and “New Public Management”.

The managerial changes that were brought about became known as the New Public Management, which focused on the following areas:

- Hands-on approach to management [College managers are accountable through delegations of authority and the organogram];
- Standards and measures of performance-setting [all managers possess work-plans and operational goals and targets];
- Emphasis on output controls [attention to results through work-plans and objectives];
- Disaggregation of large public sector units into smaller units for greater efficiency [representative of a separation of duties by the creation of the finance and supply chain management functions into different units] ;
- Emphasis on competition regarding tendering and contracting to lower costs [the College has developed its supply chain policies and procedures];
- Implement private sector style of management to create flexibility [evident through various business units like human resources and marketing, and planning structures like the Institutional Management Team; and
- Greater discipline on resource utilization to enable cost saving by implementing sustainability measures and internal audit functions.

The above discussion is in support of the College implementing the principles of the Public Management model. It is reflective of a College that has shifted its focus from an administrative function to a management dynamic parallel to the corporate sector. Hughes (2012:88) refers to this model as a “shift in management systems from inputs and processes to outputs and outcomes with measurement towards performance indicators and standards. It emphasises a flat management structure with market-like strategies for delivery on public services by contracting and privatization whilst considering the promotion of public/private partnerships with a move from universalism towards individualism and efficiency”.

Some reforms in public sector management included an emphasis on:

- **Management and not administration** – the public manager is expected to achieve results and be accountable, hence a move from administrating to managing processes by being involved in strategic planning processes and work-plan development where staff's performance are measured;
- **Leadership** – the use of personal attributes and personality to motivate people which is a key characteristic in the managerial model;
- **Results focused** – a responsible manager must achieve results and be accountable for it through the performance appraisal process which is supported by Integrated Quality Management System and Employee Performance Management System;
- **Strategic approach** – long-term perspectives on aims of governments can be achieved through strategic planning and decision-making, in an approach well used in the private sector. The College as part of its management and leadership functions has generated strategic plans enabled by management and its governance structures;
- **Improved financial management** – better ways for programme budgeting using latest accounting systems and the devolution of budget responsibility to lower levels. Financial management processes has been enabled through internal and external audit functions;
- **Flexibility in staffing** – the effecting of staffing management controls to utilize staff on specific need and dismissal of staff as per the situation at hand and the application of robust incentive systems to motivate staff to perform optimally. The College is cognisant of and implements labour relations controls if and when required and facilitated by the human resources department;
- **Competition and contractualism** – this is seen as reducing costs and promoting competition between service providers by implementing College supply chain procedures that have been developed;
- **Relationship with politicians** – the public manager needs to interact with the politician and not be viewed as a master/slave relationship, as previously pertained . This is evident through the College rector attending meetings as presented by the DHET minister; and
- **Relationship with the public** – based on the demand to be more client-focused, there is a need for greater interaction and accountability between public sector managers and the public. There is active participation between the College and the multitude of

communities it serves in the north eastern region of Durban together with other business stakeholders.

The College is observed to be progressively identifiable with the characteristics of the new public sector reforms. The managerial model in the public service has great promise and has been implemented in many developing countries to allow for actions to be carried out in a more efficient and cost-effective way by providing the relevant information for decision-makers. Public managers are now responsible for the achievement of results and to produce more goods and services using less at their disposal, (Hughes, 2012:102).

- **Governance as a function in Public Administration**

The preceding models of public administration emphasized “bureaucratic hierarchy and administrative interest” as central features. The New Public Governance [NPG] practice places the citizen rather than the government as the focal point, where government is an “actor” with other stakeholders engaging policy considerations and service delivery. This approach underlines ‘inter-organizational relationships and the governance of processes’, as deliberated by Robinson (2015:9). Governance therefore, is premised on a ‘whole of government approach to service delivery.’”

There are three areas of governance and its associations that need to be explored are, *namely*, corporate governance, governance as the new public management and governance as networks.

Corporate Governance - In private sector organisations, when one looks at their rules and areas of regulation, the concept of corporate governance becomes synonymous as this relates to their structures of accountability and principle-agent issues. Based on, for example, the world economic crisis in 2008, there has been a greater need to improve corporate governance through improving accountability mechanisms as well as looking at directors’ responsibility and how management can ensure that the share-holders interests are complied with. Other aspects to improve corporate governance was to ensure compliance regarding financial disclosures, auditor independence, clarification of corporate responsibilities, as well as the setting up of advisory boards to discipline accounting firms. The designing of structures for internal accountability that will lead to better managerial performance and investor confidence is highlighted as another improvement mechanism in corporate governance, (Hughes, 2012:132).

Governance as the New Public Management - The new reform program referred to as the New Public Management has direct associations to governance as it is related to corporate management [private sector management], and marketization [incentivisation of the public service]. Steering is central to public management and is used in association with governance, as steering involves increasing customer demands whilst cutting back on resources, (Hughes, 2012:133). The New Public Management reform is undergoing a change to establish governance practices for the future – a reform in governance referred to as New Public Governance where multiple actors add value to public service delivery and where multiple processes informs the policy-making system, (Hughes, 2012:136).

Governance and Networks - Governance is also referred to as self-organising, inter-organisational networks as there is an incorporation of external institutions within government in the delivery of services such as the outsourcing of services to consultants. There is a need between the stakeholders to share resources and a sense of purpose. These networks are not accountable to the state as they organise by themselves and are autonomous. The network plays a role in influencing the state on some decision-making matters such as policy. Government then acts out the decisions taken in the network. Government can also influence the network by asserting its power [locus of government] in the market, without public funds being spent thus steering the network. This is meaningful as the state and society are brought closer together through the network interactions. There is continuous political bargaining as the network bargains with the state, but in all transactions a mutually beneficial relationship occurs, (Hughes, 2012:139).

Usefulness of Governance - Governance has been described as tight, having the characteristics of clear objectives, instructions and follow-up with a goal-oriented approach. There is a need for firm frameworks and effective supervision as the management are sceptical of the staff. Governance is less stringent where it is influenced by management being less suspicious of staff and having confidence in the co-operative environment of recommendations, as opposed to commands in tight governance. Governance essentially is about running organisations, be they private or public. It endeavours to bring about resolutions to society's problems through structures and institutions that may have nothing to do with the political system.

Through the literature review, it is clear that the evolution of public administration models emphasises that the citizens should be the core facet in the service delivery process. The New

public Governance approach emphasizes “the designing of structures for internal accountability that will lead to better managerial performance.” This implies the development of systems for accountability in the process of enhanced service delivery to the citizen. The focus of the past has been on process and procedure development, then on results and outcomes, rather than public value. The citizen must be central in the governance process and public decisions must be made through meaningful interaction with citizens. This means that they are not only receiving services from the state but that they are contributing to the development of public policy and programs, emphasizes (Denhardt and Denhardt, 2009:409).

2.3 EFFECTIVE PERFORMANCE IN THE PUBLIC SECTOR

In order to facilitate the promotion of effective performance in the public sector, one has to first understand the concept “effective performance”. Effective as in effectiveness, is doing the right tasks in the attainment of a goal, (Robbins and De Cenzo, 2005:538). Performance is a measure in the attainment of a goal or objective. Hence the management of performance is performance management.

According to Cloete (2013:274), the public sector has embarked on a “new” approach – to measure performance according to predetermined indicators. The aim is for employees to set and achieve predetermined standards in their executive actions. The main focus of performance measurement is to determine whether the set goals have been achieved and to exercise control. Cloete (2013:4) also says that the State as a public institution has the responsibility to maintain law and order, to provide public services to maintain society and to promote the general welfare of the population. In order to facilitate this function and to effectively deliver in its mandate to provide a better life for all, the state embodied in its public institutions is classified into 3 principle groups:

- Legislative [laws of the state];
- Executive [political office bearers]; and
- Judicial [courts of law].

These institutions of government ensure the development of policies to enable services to be delivered to the country’s citizens through the development of legislation, while ensuring compliance with such legislation.

2.4 THEORISING RISK MANAGEMENT WITHIN THE PUBLIC ADMINISTRATION PARADIGM

2.4.1 Legislative Institutions

2.4.1.1 Constitutional Imperatives

Regarding effective performance, the preamble of the Constitution of 1996 states, *among other things*, that the purpose of this supreme law is to “improve the quality of life of all citizens and free the potential of each person”. One of the values of the South African Constitution under Section 1 is the achievement of equality, human dignity and the advancement of human rights, (Cloete, 2013:9). Chapter 2 in the Constitution, which proclaims the Bill of Rights in Section 7 – 39 provides as follows:

“The Bill of Rights is a cornerstone of democracy in South Africa. It enshrines the rights of all people in our country and affirms the democratic values of human dignity, equality and freedom”, (Cloete, 2013:9).

According to the Constitution of 1996, the legislative authority is vested in Parliament where laws are interrogated and sanctioned, and in this case support performance and service delivery in the public sector. For example, the FET Act 16 of 2006 as amended [concerning the TVET College sector], was reviewed and amended in 2012 to ensure that the governance powers shifted from the College council back to the State. This brought about more stability regarding employee concerns. This stability is important as the TVET College sector has been identified as the key driver regarding the skilling of the nation, employability, and therefore, poverty alleviation.

From a legislative perspective and concerning TVET Colleges, TVET Colleges are mandated through the FET College Act 2006 as amended, to organise and institute a College council that will have a governance function over the College. There are external members of council whose appointment will be ratified by the Minister of Higher Education and Training. The council’s function is to endorse all College policies to ensure that the College operates optimally. Another function is to ensure that the College generates a strategic plan to ensure that the College operates according to National imperatives like the National Growth Plan.

The College is part of the South African public administration system and is compelled to uphold the values as stipulated in section 195 of the Constitution of 1996. The College is

therefore, obligated to maintain a high standard of ethics and must be accountable for decisions undertaken. According to section 195(1)(b) of the Constitution of 1996, it is mandated to implement processes that are “efficient, economic and effective”. It is the responsibility of the Auditor-General to assess and report on financial aspects of any state institution. This includes the College as it is an institution that is state-funded, as highlighted in section 188(2) of the Constitution. It therefore, is incumbent that the above Constitutional obligations of the College be analyzed during the research process.

2.4.1.2 Public Finance Management Act and College Compliance

According to the CET Act, Chapter 5 section 25(1)(c) and regarding the financial records and statements at public Colleges, “Colleges need to implement internal audit and risk management functions which are not sub-standard to the standards set out in the Public Finance Management Act of 1999 [PFMA] (Act 1 of 1999 as amended).”

With regard to the PFMA, section 38(a)(ii) and under general responsibilities of accounting officers, in this case the College rector, must ensure that he/she sustains efficient, effective and clear systems of internal control, financial management and risk management. Through this legislation, the PFMA essentially set in motion a legal framework for the establishment risk management practices in the public service, thereby obligating all public sector institutions to implement risk management strategies. According to Sangweni (2003:i), risk management is a vital management tool to “support accountability and is invaluable in preventing corruption and wastage of resources”, thereby make accounting officers accountable for risk implementation as part of their responsibilities.

2.4.1.3 Public Service Commission and the Context of Risk Management

The Public Service Commission Report (2003:33) states that risk management is one of the constituents of the organizational control environment which adds value to the overall efficiency of the control system. It is further indicated that performance management systems play a pivotal role in enabling and supporting the risk management strategy through integrating risk with other management processes. This integration of risk management is applied during strategic planning processes where risk is identified for each key objective of the business unit. The continuous changing of the business environment creates risk

exposure, which necessitates the implementation of monitoring and review processes. This is integral to operations management which aims to foster improved service delivery to the client.

2.4.1.4 Monitoring and Evaluation and Risk Management

In the Department of Performance Monitoring and Evaluation [DPME] Strategic Plan 2011/12 – 2015/16, it is stated that departmental performance monitoring must become a “mechanism for improving management practices” in the public service. The strategic intentions are to change bureaucratic and unresponsive management culture to one that is sensitive to clients’ needs and service delivery, through focussing on the required changes. It is the intention of DPME to “monitor front-line service delivery” of service delivery departments, such as the TVET College which interacts with the public, Department of Performance Measurement and Evaluation Strategic Plan (2011:3).

The mission statement of DPME reflects a willingness to improve government’s performance to improve service delivery through changing the way government functions to attain continuous improvement as a vision. Strategic program One of the DPME which considers Administration, is specifically responsible for management, strategic leadership and administrative support. In this regard, the Office of the Director-General is responsible for internal audit and risk assessment. This reflects the importance of risk management processes in the achievement of departmental goals to facilitate and achieve service delivery objectives. This reflects the critical importance of the risk management function within DPME and is illustrated by the following strategic objective table:

Table 2.1: DPME Strategic Objective

“Strategic Objective 1.2	Ensure that the department complies with good corporate governance principles.
Objective statement	Conduct annual risk assessments and develop a risk management strategy and plan in line with National Treasury risk assessment guidelines.
Baseline	No formal risk assessment conducted.

Justification	Risk assessment and mitigation is a requirement for good corporate governance and alerts the organisation to potential obstacles to meeting performance targets.
Links	Outcome 12 – efficient and effective public service.”

Source: DPME 2011/12 – 2015/16 Strategic Plan

The table above depicts the importance of risk management in the process of achieving service delivery. It is reflective of government’s commitment through the strategic initiatives of the office of the DPME which needs to be cascaded and filtrated to business units and finally, the customer as was intended in the values of public service departments.

The preceding pieces of legislation and strategic frameworks are specific to ensuring that administrative standards are in place to promote effective performance, and where public officials become accountable in the process of service delivery. Cloete (2013:17) mentions that State institutions that support and strengthen Constitutional democracy and thereby enhance performance in the public sector:

- The Public Protector [the function to investigate the conduct of the public administration and state’s affairs regarding impropriety];
- The Human Rights Commission [to protect, develop and the achievement of human rights];
- The Commission for Gender Equality [for the attainment and protection of gender equality]; and
- The Auditor General [to audit and report on the financial management of all state institutions].

The above are some of the “Chapter Nine” institutions that are in place to strengthen Constitutional democracy to ensure, for example, that the citizen is protected and the state becomes accountable regarding how it enacts its functions. The principle function of the legislative authority is to generate and adopt policy for the country, as conveyed through legislation to be effected by the executive authority, and as articulated by Du Toit *et al.*

(2002:74). It follows then, that adherence to these Chapter Nine institutions is imperative for sound risk management practices in public institutions.

2.4.2 Executive Institutions

The executive institutions and functionaries comprise political office bearers and officials. This structure of the state deals with members of the Cabinet [President, Deputy President and Ministers]. Cloete (2013:21) points out that the political function includes:

- Supervising the administrative activities to ensure that they effectively and efficiently satisfying the real needs and justified expectations of the people;
- Overseeing the administrative institutions to ensure that they are functioning effectively and efficiently; and
- Giving account to the legislature and society about the functioning of the executive institutions.

These political functions consist mainly of the integration of political considerations and administrative considerations to establish a government and public administration which will promote welfare of society, which is to create a society in which the real needs and justified expectations of the population will be promoted to the greatest extent, with the available limited resources, (Cloete, 2013:20).

It is therefore, stated in Du Toit *et al.* (2002:74), that the function of the executive authority is to execute the policy as approved by the legislative authority as well as to serve as a structure for executing policy. From a practical viewpoint, Dr Blade Nzimande, the Minister of Higher Education and Training under which TVET Colleges are administered, meets with all College rectors on a regular basis. Apart from a variety of reasons to meet with the rectors, the minister primarily seeks to establish whether TVET Colleges are fulfilling their mandate, which is to skill the nation effectively. As a minister, it was ensured that recently when students at various institutions were on strike action regarding the shortage of funds, funding was available for approximately a billion rand. This relates directly to fulfilling the justified expectations of society, thereby enhancing performance and expectations of the department.

2.4.3 Judicial Institutions

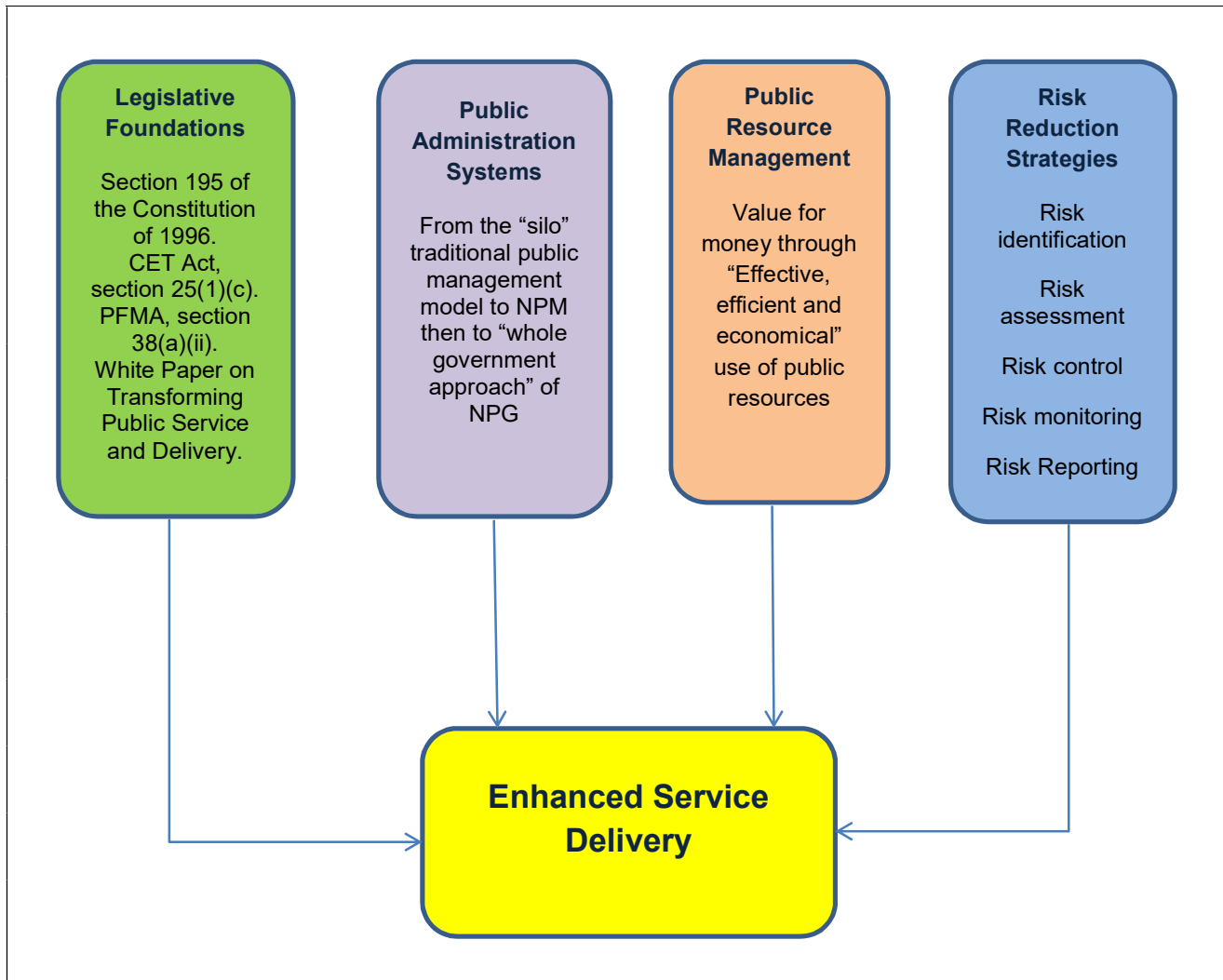
Chapter 8 of the Constitution of the Republic of South Africa Act of 1996, according to Cloete (2013:27), provides for courts and administrative justice. The judicial institutions of SA can be classified into the following:

- The Constitutional Court;
- The Supreme Court of Appeal;
- The High Courts;
- The Magistrate Court; and
- The Small Claims Courts.

From the foregoing discussion, the primary responsibility of the judicial authority is to pass judgement in all cases before the courts as listed above. The Constitutional Court, through section 166(a) of the Constitution of 1996, and the Supreme Court of Appeal through section 166(b) of the Constitution of 1996, have been established for this purpose, as pointed out by Du Toit *et al.* (2002:74).

By analysing the above discussion, it is observed that the public administration landscape has evolved through the decades from a bureaucratic system followed by managerial ideals, and finally resulting in “contractualism”, where the citizen is able to participate in governing decisions. Such participation by the citizen or the client was enabled through constitutional and legislative frameworks to ensure that the citizen obtained “effective, efficient and economical” provisioning from government leading to enhanced service delivery.

Figure 2.1: Service Delivery Mechanisms



Source: Author’s Perspective

The above illustration encapsulates how service delivery can be achieved in the public sector environment through different approaches such as public administration legislative frameworks, the public administrative system, the effective use of public resources and through risk management processes.

Therefore, legislative, governmental and administrative institutions and functionaries must ensure that their performance meets the real needs and justifiable expectations of the people. The mechanisms for enhanced service delivery as illustrated above, must ensure that all citizens are able to enjoy and exercise their fundamental rights and freedom founded on the specific values declared in the Constitution, as maintained by Cloete, (2013:121).

2.5 PUBLIC SECTOR SERVICE DELIVERY

The Constitution of 1996 stipulates that the public administration should adhere to a number of principles:

- High standards of professional ethics be promoted and maintained [performance effectiveness];
- Services be provided impartially, fairly, equitably and without bias [service standards];
- Peoples' needs be responded to [the customer comes first];
- The public be encouraged to participate in policy-making [stakeholder involvement and consultation]; and
- To be accountable, transparent and development-oriented [service commitment].

Based on the above values, the Bill of Rights in the Constitution of 1996 gives citizens certain rights to take action against the state if they believe their Constitutional rights have been infringed, and to have access to information held by the state which they need in order to be able to do so.

The White Paper for the Transformation of the Public Service calls on national and Provincial departments to make service delivery a priority. It provides a framework to enable national and Provincial departments to develop departmental service delivery strategies. These strategies will need to promote continuous improvements in the quantity, quality and equity of service provision. It further specifies that to ensure that service delivery is constantly improved, national and Provincial departments will be required to outline their specific short, medium and long-term goals for service provision. They would also be required to provide annual and five-yearly targets for the delivery of specific services, and to report to their respective national and Provincial legislatures on their achievements.

Improving the delivery of public services means redressing the imbalances of the past and, while maintaining continuity of service to all levels of society, focusing on meeting the needs of the 40% of South Africans who are living below the poverty line and those, such as the disabled, and black women living in rural areas, who have previously been disadvantaged in terms of service delivery. The introduction of a service delivery improvement programme cannot be achieved in isolation from other fundamental management changes within the

public service. It must be part of a fundamental shift of culture whereby public servants see themselves first and foremost as servants of the citizens of South Africa, and where the Public Service is managed with service to the public as its primary goal. The White Paper on Transforming Public Service Delivery therefore, seeks to introduce a fresh approach to service delivery: an approach which puts pressure on systems, procedures, attitudes and behaviour within the Public Service and reorients them in the customer's favour, an approach which puts people first, www.dpsa.gov.za

Service delivery is a critical and necessary responsibility of government and the institutions of government. Public administration and management thereof, is the vehicle to ensure that these services are delivered to the citizens of the country through a planned and systematic approach. This takes place through the enablement of the particular institution of government.

The process of service delivery originates when there is a need or expectation by the public for the provision of a service by government, which constitutes the input of service delivery. This provides the reason for the existence of government at national, Provincial and local level. The public administrative process provides for policy-making, availability of funds, staff and work process through the creation of structures in a controlled environment. This process leads to the creation of policies which are aimed at providing a solution which results from an expectation from the public. This policy is then implemented through an administrative management process of planning, leading, organizing, co-ordination and control, resulting in a service being delivered to improve the general welfare of citizens being governed.

Emanating from the above service delivery obligations, it is imperative that government institutions need organizational structure and suitably qualified staff to deliver on these services that requires the interventions of the three spheres of government. The first sphere is the national government for the whole country, then the nine Provincial governments for the delivery of certain services to their communities, and local government who are responsible for services to their local communities. National government provides services like education, health, protection and defence. The Provincial government provides functions like veterinary, ambulance and library services. The provision of water, electricity and waste removal are the responsibility of local government. These services, as delivered by the three spheres of government, are critically dependent on the interactions between public

administration functions and the management thereof, Du Toit *et al.* (2002:80-91). The illustration that follows reflects the components of the 3 spheres of government.

Table 2.2: The Three Spheres of Government

SPHERE	ASSEMBLY	DECISION-MAKING	ORGANIZATION
National	Parliament	President and Cabinet	Directors General and departments
Provincial	Legislature	Premier and Executive Council	Heads of Department and staff
Local	Council	Mayor and Mayoral Committee	Municipal Manager, HoDs and staff

Adapted from: <http://www.etu.org.za/toolbox/docs/govern/spheres.html>

Public service delivery is influenced by the environment in which it occurs through decisions and actions that are taken. South African is challenged by poverty, unemployment and inequality. Based on this, government must take action and implement programs to address these challenges, for example through the implementation of the New Development Plan [NDP]. This is undertaken by government to create an environment in which the citizens of the country can prosper. The NDP is driven through different government institutions like the Departments of Trade and Industry, Economic Development and Finance. As a result, services are delivered through government programs and its institutions. Therefore, the effectiveness of service delivery programs is influenced by the environment in which it occurs, where public servants play an intermediate role between the service provider [the state] and the public who are expecting the service. This necessitates that government creates a favourable environment for quality service delivery as an expectation of the citizens it serves, as outlined by Du Toit *et al.* (2002:92-102).

According to the Constitution of 1996, section 195 states that the public administration system must be governed by democratic values and principles through the promotion of a high standard of professional ethics and efficient, economic and effective use of resources. To give effect to these provisions in the constitution, the generation of the White Paper on

Transforming Public Service Delivery is an example of government's commitment to acknowledging good government by requiring officials to consider their clients as a first priority, as cited by Cloette and Thornhill, (2012:5-10).

2.6 THE 'GENESIS' OF THE TVET COLLEGE

After 1994, Technical Colleges and later Further Education and Training [FET] Colleges, the predecessor of Technical and Vocational Education and Training [TVET] Colleges were assigned as Provincial competencies and were administered by Provincial Education Departments. In 2009, the President in his State of the Nation Address declared that the FET sector with 50 Colleges and 250 campuses nationally, will be the primary site for skills development training. In the same year he issued a proclamation which gave rise to the establishment of a Department of Basic Education and a Department of Higher Education and Training [DHET]. It was decided that TVET College education should form part of a single co-ordinated post-school education system which supports expanded access, improve quality and an increased diversity of provisioning. The administration of this function would be implemented by the Department of Higher Education and Training, (TVET College Times, 2015:30).

This transfer of FET Colleges and the functions under the FET Act 16 of 2006 from the Department of Education to DHET was brought about by Proclamation No. 44 of 1 July, 2009. These Colleges were identified as key institutions to broaden post-school educational and training opportunities. They must also provide opportunities for school leavers including matriculants, who are unable to access higher education institutions, (Address by DHET Minister to South African College Principals Organisation, 17 August, 2009:2).

2.7 TVET COLLEGES TRANSFER TO DHET

The transfer and control of TVET Colleges to DHET took place on 1 April, 2015. According to the Minister of Higher Education and Training, Dr. B. Nzimande, technical and vocational education has been largely marginalised stemming from the apartheid era. These institutions of learning had a rather poor public image and many students entered the College system of learning, as they could not enter university or universities of technology, for that matter.

Colleges were not the preferred sources of post-school education; it was therefore perceived as an inferior institution of learning. The minister further comments that this was a “big problem” for the country as the vocational programs offered by Colleges were needed to expand the economy. As a result, corrective actions had to be undertaken to ensure that students entered useful educational institutions, (TVET College Times, 2015:2).

TVET Colleges therefore, had to be integrated into a coherent post-school system of education where aspects such as College qualifications, among others, needed to be recognised by higher education institutions in order to facilitate articulation or transition between the different education institutions, that is, to articulate from College to university. Skills funding for programmes in TVET Colleges had to be resourced by Sector Education and Training Authorities [SETAs] and the National Skills Fund [NSF]. SETAs have been mandated to broker links between Colleges and employers so that students obtain relevant experiential training, (TVET College Times, 2015:2).

The minister also reflected that enrolments at universities were four times more than that in further education Colleges, whereas it should be the other way around. There was little funding being directed to Colleges, which also affected student enrolments. Industry had become very vocal about the lack of industry-related training programmes in Colleges. This resulted in industry disinvesting in the College sector, the quality of programs suffered, and throughput and pass rates declined excessively. This resulted in unemployment rising severely in the country and industry complaining about the lack of skills development. Drastic measures had to be undertaken to turn the desperate situation around, which resulted in the Department of Higher Education and Training taking control of further education and training Colleges and transforming them into Technical and Vocational Education and Training Colleges, (FET College Times, 2014:3).

2.8 TVET COLLEGE GOVERNANCE

According to chapter 3 of the FET Act 16 of 2006 as amended, all public TVET Colleges need to establish a College council which will be responsible for the governance function of the College. Section 10 of the act further stipulates that the College council is responsible for the development of the College strategic plan, taking into consideration the College mission and vision with relevant stakeholders. Members of council need to have a broad

understanding of further education and development. According to section 10 (6) of the act, such members need to have relevant financial, human resources and legal expertise in order to give direction to the College. The College council may create other committees to assist it in its strategic mandate. Council members come from a broad spectrum of society, the private sector as well as from non-governmental organisations.

The appointment of council members is fundamental in the building of TVET Colleges which serve in the skilling of the nation. Councils provide direction as well as playing an oversight role, as they need to ensure that the transformation agenda of government is being fulfilled. Their role is to bring about stability in Colleges that was previously lacking, explore new ideas and innovation, as well as build partnerships between Colleges and various stakeholders in order to capacitate the College. Councils through the College will contribute to a much more equitable society while tackling social and economic inequalities. This will be through access to the provisioning of quality and relevant education and training via the development of capable institutions. Central to this outcome is the role of College councils in their governance function. As a result, council members need to develop an insightful understanding of the nature of the College system in order to undertake strategic decisions. Councils need to be effective, efficient, dedicated and motivated to serve the College in realizing the goals of the TVET College sector in order to transform the country socially as well as economically, (FET College Times, 2014:2).

2.9 PLANNING FOR SUCCESS IN TVET COLLEGES

According to the White Paper for Post-School Education and Training (2013), TVET Colleges play a pivotal role in developing a knowledgeable and skilled citizenry that will effectively contribute to social and economic development of the country. These institutions are the backbone of technical vocational education and training which will address the skills deficit as well as advance economic growth. Young individuals can choose a vocational pathway to change careers or upgrade their skills, as TVET Colleges will become institutions of choice for producing mid-level skills.

In order to realize the societal and economic goals of the country, the TVET College strategy must align itself to 5 of the 8 DHET's key strategic goals:

- Increase the number of skilled youth by expanding access to education and training for the youth;
- Ensure that capacity is built for post-school education and training institutions for effective facilitation and provisioning of learning;
- Increase the number of students entering the labour market once their training is complete;
- Develop a College curriculum that is responsive to the demands of the marketplace and is able to adapt quickly to the changing skills needs with an emphasis on artisan training; and
- Improve the quality of teaching and learning provision, (White Paper for Post-School Education and Training).

These 5 strategic goals of the DHET must be encapsulated in the TVET Colleges' five year Strategic Plan and Annual Performance Plan [APP], with targets being measured according to the plan. Therefore, TVET Colleges should undertake two types of planning processes: strategic and operational planning. Strategic planning requires decisions pertaining to the College's vision, mission, environment and institutional strengths and weaknesses. Operational planning requires various functions of the College like human resources, finance and administration; to make decisions as to what role they will play in helping to fulfil the College's mission and goal attainment, (DHET TVET Strategic Planning, 2014).

The 5 year strategic plan sets out the College's policy priorities, programmes and project plans while looking at the resources required to undertake goal attainment is approved by the College council. This strategic plan must support Provincial and regional growth plans such as the Integrated Development Plans [IDP] of municipalities. Government's Medium Term Strategic Framework, Ministers Performance Agreements and Service Delivery Agreements provide a basis as inputs for College strategic plans. After the strategic plan has been endorsed by the College council, it is sent to the DHET Minister for approval where it is analysed for alignment to national goals and outcomes as per the Minister's Performance Agreements.

The Annual Performance Plan [APP] contains College programmes and projects for the upcoming year and the 3 year Medium Term Expenditure Framework as required, to implement the 5 year Strategic Plan. APPs contain performance indicators, targets and resources required to achieve the objectives of the Strategic Plan [SP]. The APP is also

submitted to the College council for approval, after which it is sent to the DHET minister for endorsement. Performance tracking of APPs is conducted on a quarterly basis through a quarterly report and concluded with an annual performance report. APPs are used to develop the annual budget for the College which reflects funded service delivery targets. Monthly financial reports provide the basis for implementation and monitoring of the budget which concludes with the year-end report on the annual financial statements.

Strategic, Operational and Annual Performance planning are inter-related and are processes for decision-making regarding the direction of the College. These are mechanisms for council, management and staff regarding what should be done, how it is done, when is it to be done, who will do it, what will it cost and to know when it is successfully completed. This is undertaken to ensure that the limited resources provided for the delivery of technical education and training are realized as a maximum return on investment made by government, (DHET TVET Strategic Planning, 2014).

On 17th August, 2009 the DHET Minister in the address to the South African College Principals Organisation [SACPO], stated that government was committed to the FET sector in order to realize their mission, but these institutions must ensure that training and skills development initiatives respond to requirements of the economy, rural development challenges and social integration. As a result, funds amounting to R1.9b were made available to all FET Colleges (Address by DHET Minister to SACPO, 17 August, 2009:2).

The funds for recapitalization of FET Colleges were to upgrade infra-structure, develop human resource capacity and information technology systems, as well as improve equipment and resources for teaching and learning, (State of the Nation Address, 2009:15). This allocation of funding for further education and training Colleges affirmed government's commitment to this sector. It demonstrated the importance of these institutions in terms of addressing government's triple challenge, that being unemployment, poverty and inequity. Therefore, it is incumbent for the public service to put people first in the provision of services that is effective and efficient in all government departments, (State of the Nation Address, 2009:14).

2.10 TVET COLLEGE STRATEGIES FOR EFFECTIVE PERFORMANCE

In order to meet and exceed the expectations of the citizens of the country, public managers need to prepare themselves to realise their official and social responsibilities. Their performance can be enhanced by implementing the following:

2.10.1 Management training and development

Based on the complexity, extent and changing nature of public issues and constant challenges facing public managers, managers need to undergo relevant training and development to remain well-informed. Such training will overcome low productivity, ineffective methods and procedures, and ignorance about new techniques and systems. In order to be progressive, College managers have embarked on executive leadership training.

2.10.2 Strategic thinking

Strategic thinking becomes very important during the preparation of the annual budget and strategic planning cycle. By thinking strategically, managers can accomplish a planning process making community participation possible, as the outcomes of College activities are to serve the communities in which the College finds itself. The community is a key stakeholder and is part of the constituency of the College Council. Collecting relevant information to develop strategic proposals is critical in the development of strategic targets where management sources information from previous strategic plans, College work-plans, College objectives schedules, audit report finding, as well as engaging the opinions of students, staff and the community. Strategy development considers the identification of political obstacles and how to overcome them; the change of political leaders and their influences as political actors can influence the agenda of the College through political appointments or representations on the College Council. It is critical that there is an evaluation of the existing strategic plan for applicability and relevance, to inform the development of the new strategic plan.

According to the Deputy Director: Academic Services, Elangeni TVET College implements strategic planning processes where all managers need to submit their department's strategic plans after consultation with their staff. The plans must ensure that the macro plans of DHET provide strategic direction.

2.10.3 Visionary and transforming leadership

To be recognised and accepted as legitimate, it is necessary for public managers to have a clear vision which leads to transformation in the institution. Such a vision should be known to everyone and pursued jointly.

2.10.4 Marketing

Marketing as a public management activity is often undervalued; consumers of the public sector must therefore, be informed of the variety of services and products produced by public institutions. The public manager must identify opportunities and threats in the market environment. The College undertakes various customer satisfaction surveys in order to establish how effective it is in providing services to clients.

2.10.5 Public Relations

Positive relations must be developed between colleagues, various departments and with the public. This aids in addressing public challenges. It is government's democratic obligation to communicate with its subjects [the public] on government initiatives, policies and services and/or products. For example, the public has a right to know how taxes are being used, (Van der Walt and DuToit, 1997: 404). A case in point concerning the College is that the Marketing Manager has often been on radio dispelling allegations levelled against the College.

2.10.6 Service Charter

According to Lawton and Rose (1994:169), the Charter can be seen as an umbrella for many of the reforms of the public services which government wishes to implement dealing with efficiency, the implementation of executive agencies and market testing in the civil service.

Elangeni TVET College implemented a Service Delivery Charter in 2009 to ensure that their clients, both internal and external, obtained the best service possible from the College. The College service delivery charter commences with the College mandate which obligates the College to service standards. The College vision is outlined supported by its mission and values: the ethical elements of the College. All College stakeholders are made aware of the College's purpose through its strategic objectives, supported through an undertaking statement from the College Council. The service delivery charter informs stakeholders about the services offered in the College by committing to service standards and Batho Pele

Principles. Procedures have been outlined as to how the College deals with complaints by providing contact details for the management to assist any stakeholders who are unhappy about services rendered by the College.

2.10.7 Quality Management Systems

There is a “quality philosophy” in the private and public sector. The common term that has been coined to describe this is Quality Management, submits Robbins and DeCenzo, (2005:75). Quality Management is a system in operations management that enables ways to improve production or service effectiveness to ensure that the client receives the best possible standards of service. It allows for continuous improvement and accountability. Elangeni TVET College as a public sector organisation has an ISO 9001 quality management system that is accredited by the South African Bureau of Standards. According to the Deputy Rector: Academic Services, “the Quality Management System has improved the College’s operations tremendously. It has given credibility in the way things are done ensuring that all stakeholders are satisfied with our services”.

According to Lawton and Rose (1994:212), there are key phrases being used in public sector organisations:

- A learning organisation – College staff need to keep abreast with the latest technology especially if they are lecturing engineering and skills disciplines;
- An adaptable organisation – this concept is portrayed by the College adapting to demands in the educational landscape such as changing legislation, for example the Continuing Education and Training Act of 2006, where control of Colleges shifted from a Provincial to national imperative;
- A responsive organization – the College responds to the demands of business and industry needs by providing specific training programs to enhance their development; and
- An innovative organisation – the management has devised mechanisms by developing a College sustainability plan where innovative methods have been developed to sustain the College through business linkages and partnerships.

The above discussions provide evidence that the College is continuously developing to ensure that enhanced services are delivered to its clients and has implemented a risk management strategy to evolve towards corporate ideals and functionalities.

2.11 CREATING PUBLIC VALUE

According to Shafritz and Hyde (2012:470), the objective [of work] in the public service is to create public value. Apart from finances, the public manager uses other resources, as well as authority to compel individuals to contribute to the achievement of set public objectives. Producing the desired results is not enough; public managers must show that the results obtained are worth the cost of consumption.

As long as there is an increase in the net social interest in support of a public policy, that policy must be an impartial policy. Public value is instilled through democratic practices where in a political system the interests of the people at large prevail, (Denhardt and Denhardt, 2009:3). Adherence to bureaucracy does not allow for a flexible, innovative and responsive public service that is able to adapt to a turbulent and changing environment, (Lawton and Rose, 1994:39). These can be stumbling blocks in the process of adding value to the needs of the public. The implementation of a Citizens' Charter in the public service is an innovative way to ensure the services are delivered to the public effectively, based on the following principles: setting of standards, information and openness, choice and consultation, courtesy and helpfulness, putting things right and value-for-money, (Lawton and Rose, 1994:169).

According to Loynes (2016:4), TVET Colleges are the country's primary source for the training and development of artisans and are key institutions to realize the objectives of the country's Human Resource Development strategy.

This view is supported by Mpondomse (2016:4), who says that "The TVET system holds the key to unlock the human resource development challenge, and by extension unemployment, which will ultimately contribute to the broader objective of socio-economic transformation and a more equal society." Mpondomse also stressed the challenges in the TVET sector, identified by poor delivery of teaching and poor management and administration of institutions.

In terms of openness and access to information, Section 72 of the South African Constitution allows for public access to and involvement in the National Council of Provinces. The National Assembly must also facilitate public involvement in the National Assembly, (Cloete, and 2013:72). The value of the citizen must not be under-estimated as government needs to respond to the needs of society and must encourage public participation in the policy-making process, (Burns, 1999:68).

2.12 CONCLUSION

The public must be able to express their views about their dissatisfaction when it pertains to services provided to society. A case in consideration is the “#FeesMustFall” campaign, in 2015 and 2016, where students have shown their dissatisfaction about the cost of education and how it impacts their lives. It is a representation of democracy that is vibrant. Central aspects of democracy are individualism, equality and liberty. The citizen must not be viewed as a source of tension. Instead, the public manager must be transparent with the public to engage it in meaningful ways, where the public can challenge institutional policies. It is therefore, incumbent on the public manager and in this case, the College rector, to understand the expectations of College stakeholders to ensure public value through the delivery of effective and efficient services.

This chapter provided a discussion on the public administration landscape, and the need for the support of effective performance. Risk management was theorised within the paradigm of public administration. It then focussed on service delivery dynamics in the public sector. The researcher illustrated how the TVET College was located within the public service. Teaching and learning is a core function of the College and a description was provided as to how planning for success in a TVET College was undertaken. Finally, a discussion followed on College strategies for effective performance to create College value for teaching and learning. This chapter is followed by Chapter 3, which illustrates the evolution of risk management from the concepts of leadership and strategy, culminating in a case for risk management in the College.

CHAPTER THREE

ORIGINS OF RISK MANAGEMENT: LEADERSHIP AND STRATEGY

3.1 INTRODUCTION

The charismatic leader leads, while the followers just follow wherever the leader takes them. Nelson Mandela was an ideal example of a charismatic leader. The public manager must employ whatever resources such as personal interaction, personal qualities and personal political actions to achieve the desired results. Based on the democratization of the public sector, the leader using a “position” to lead has to work in harmony with others in realizing common goals of the organisation.

Hughes, (2012:238) mentions that the leader uses technical abilities and skills to influence subordinates as opposed to formal authority which is not in relation to the modern, participative organisational culture. A manager must achieve results and must focus on “delivery of results, understand the environment, being open to suggestions, think strategically, build new patterns and approaches whilst communicating the vision of change.” These attributes of leadership, argues the author, is a combination of both personal and positional attributes of the leader as the aspect of personality is brought into the leadership process.

According to Meyer (2012:113), worthy strategies fail as a result of the leadership of an organisation remaining passive with the notion that the strategy will be operationalized. What are the traits that differentiate a successful leader from those who are unsuccessful? The answer lies in their behaviour or actions as to how they delegate, communicate and motivate the staff. Leadership behaviour is task-orientated or employee-oriented. In task-oriented leadership, the leader supervises and controls functions to ensure that the work is done by sub-ordinates. The sub-ordinate is the instrument to get the task done. In employee- oriented leadership. The leader applies less control and more participation and motivation of the employee – the focus is on the people and their needs, highlighted by (Smit and Cronje, 1997:290).

In some cases, leadership behaviour originates through the values of the organisation. It is part of the material worth of the organisation. Leadership values, behaviours and competencies provide stability during times of change; yet at the same time must be generic

enough to encourage individuality giving rise to organisational renewal, (Meyer, 2012:167). “Heroic leadership is no longer the ‘panacea’ that an organisation seeks.” Instead “dispersed leadership” or leadership at all echelons of the organisation is seen as more suitable as a means of bringing about the desired transformation. This is based on leaders being dedicated about goals for continuous development. Such a transition for change requires careful planning and execution with visibility and presence. Dispersed leadership brings about empowerment of individuals in the process of change, as explained by Marshall, (2007:1).

Robbins and De Cenzo (2005:375), however, differ, stating that leadership style is always effective regardless of the condition not always being true. They argue that individuals, the type of job and other organisational variables can act as alternatives for leadership, thereby nullifying the leader’s ability to impact on the followers. Organisational policies, procedures, rules and formal goals can substitute leadership. Leadership, however; is another variable in achieving organisational success. The challenge though, is combining or creating an effective balance between strong management and strong leadership. Management is about dealing with complexity, whilst leadership is about coping with organisational change. New leadership ideals have shed the focus on power and placed it instead on achievement. For organisations to advance and survive in a changing landscape, leadership is seen as the fundamental ingredient towards effective goal achievement, as outlined by Grobler, Warnich, Carrel, Elbert and Hatfield, (2004:644).

Leadership directly influences the performance of any organisation, more so in the public service where service delivery is critical. In the corporate sector, the success or downfall of the business organisation is linked directly to the leader. According to Smit and Cronje (1997:284), the success of organisations is not attributed to these individuals’ ability as managers, but rather in their ability as leaders.

Cloete (2013:121) contends that the legislative, governmental and administrative institutions and functionaries must ensure that their performance meets the real needs and justifiable expectations of the people, as they will be open to inspection and are accountable. The Constitution of the Republic of South Africa 1996 was passed to make South Africa a sovereign and democratic country in which all citizens are able to enjoy and exercise their fundamental rights and freedom founded on the specific values declared in the final Constitution of 1996. According to Sorge (2002:396), the leadership role is a central aspect of the formulation of organisational policy and strategy. This links leadership to the top layer of

organisational decision-making processes regarding policy deployment, strategy setting and implementation.

3.2 STRATEGIC MANAGEMENT IN THE PUBLIC SECTOR

It is emphasized by Fox, Schwella and Wissink (1997:220) that strategic management as a management tool has beneficial possibilities if applied in the public sector. However, its application within the context of a modern organization must be considered. According to Pearce and Robinson (2003:3), strategic management is defined as “set decisions and actions that result in the formulation and implementation of plans to achieve a company’s objectives.” This is in agreement with Fox *et al.* (1997:222), who refer to Wheelen and Hunger (1987:6), that strategic management is “a set of managerial decisions and actions that determines the long-run performance of a corporation”, which includes formulation, implementation and evaluation and control of strategy. Grobler, Warnich, Carrel, Elbert and Hatfield (2004:9) refer to business strategy as management’s “game plan.” Without this, there is no road-map and action plan to follow in order to achieve the desired results. Grobler *et al.* (2004:117) refer to the South African Business Excellence Award and Prizes quality management system where it is pointed out that policy and strategy is an enabler to business results.

When viewing strategic management in the public sector and in order to understand the concept, one needs to look at the distinctiveness of the public sector context. This is based on differences that exist between private sector organizations and the public sector environment. The public sector functions in an environment where there is a less significant degree of market exposure and a dependence on authoritative entities, when compared to the private sector organization. The public organization operates within a context of formal operations and constraint by judicial and legal processes. This sector is influenced by political dynamics from various groups, as well as the external environment, which influences internal decision-making. Public organizations are exposed to more scrutiny from the public where there are greater expectations from the public as opposed to private sector organizations. The mission and objectives in a public organization are driven by a governing authority as compared to the private organization, which are inspired by entrepreneurial requirements, as outlined by Fox *et al.* (1997:231).

Decision-making in the public sector is a political process and is based largely on public policies. Such decision-makers are public representatives and elected office bearers who are appointed based on political motives. In a democratic system, these representatives may have conflicting views of the mission, objectives and functioning of the public organization, which may affect its strategic developmental process. However; policy and legal guidelines of the controlling authority guides decision-making, as this could have severe repercussions in the effective execution of strategic management in the public sector. Strategic management in the public sector is exposed to “discontinuity” which arises through uncertain agendas, unmanageable coalitions and the short tenure of political representatives. Based on the uncertain nature of the public sector, it is imperative that for its successful implementation, the “strategic management process has to be adapted” in the public sector context, as pointed out by Fox *et al.* (1997:233).

3.2.1 The Strategic Management Process

It the strategic management process, organizations must be cognizant of external opportunities, exploit internal strengths and mitigate the influence of internal weaknesses and external threats. Fox *et al.* (1997:223) state that the strategic management process in the public sector comprises the following distinctive stages:

- Strategy formulation;
- Strategy implementation; and
- Strategy evaluation.

A discussion of these significant stages in the strategic management process is provided next within the context of the research study.

3.2.2 Strategy Formulation

Pearce and Robinson (2003:21) define strategy formulation as a process that guides managers in defining the type of business in which their organization is engaged, the outcome it seeks and the means it will use to accomplish those outcomes. This phase consists of the formulation of the “mission statement, environmental analysis regarding threats and

opportunities, organizational assessments in terms of strengths and weaknesses and strategic analysis and choice.”

The mission statement describes the values and priorities of what the organization aims to achieve in the future. The mission is the starting point of how the organization will deal with “innovation, quality, customer service, employee satisfaction and acting socially responsible”, as emphasized by Fox *et al.* (1997:224). The nature of strategy formulation is politically-driven, which necessitates the inclusion of governmental decision-makers in the process of generating the mission statement.

3.2.3 Strategy Implementation

Within strategy implementation, actors in the public organization are aware of the policies set by the relevant authority bodies and as such, become part of an operational process. This process is rarely affected by contextual public organization influences as compared to the other phases as this phase deals with pre-determined strategies which need implementation. Strategic implementation takes place through the execution of action plans which specifies procedures and actions that will be executed in each functional activity. Pearce and Robinson (2003:14) advise that action plans contain the following elements:

- An identification of a specific action to be undertaken in the short-term;
- Clear timeframes for completion;
- The identification of who will be responsible for each action undertaken; and
- Outcomes that each action should generate.

From the afore-going discussion, this process takes an organizational focus where the work of the organization to be executed has to be implemented effectively and efficiently in order to make the strategy work.

According to Pearce and Robinson (2003:275), there are three mechanisms that can be used by managers to implement strategy:

- Structure - the fundamental way the establishment organizes its functions;
- Leadership – incorporating the necessity to establish a direction, embracing change and creating a team to accomplish the strategy; and

- Culture – the collective values that will create norms of the individual and set the tone of the organization.

While the above elements are internal to the organization, managers must still consider external influences such as competitors, customers or clients, partners, suppliers and the effects of global trends in the process of strategy implementation.

3.2.4 Strategy Evaluation

Strategy evaluation is the determination of what is to be measured through a framework of a standard of performance in line with public sector needs. This is undertaken through the development of operational indicators to measure performance of the public sector strategies. Actual performance is measured or compared to a set standard. For the public sector, it is imperative that the rights and needs of external stakeholders are considered and involved in the evaluation process. Political actors have a role and can influence decision-making in the evaluation process such as the determination of relevant performance standards. However; public organizations must be under control of their relevant publics. Public accountability and responsibility compels that evaluation takes public interest into account. Such actions must be tested by public scrutiny, judicial oversight and legislative obligations. The evaluation process must also take into consideration the political consequences as competing political role-players will view decisions differently, as highlighted by Fox *et al.* (1997:236).

Visser and Erasmus (2002:62) make reference to the fact that the government has to achieve certain economic and social objectives for the country and is aided through the Constitution to adopt legislation which would enable objectives realization. Chapter 5 of the Treasury Regulations requires that the accounting officer develop a strategic plan for the institution which provides a comprehensive framework for the achievement of long term government objectives. According to Visser and Erasmus (2002:65), the strategic plan must be a basis for:

- “Planning outputs the institution needs to accomplish in achieving programme objectives as acknowledged by the executive authority;
- Multi-year projections of revenue and expenditure which the Finance Minister and MECs are required to table annually in the National Assembly;
- Annual reports of the accounting officer as required by the Act;

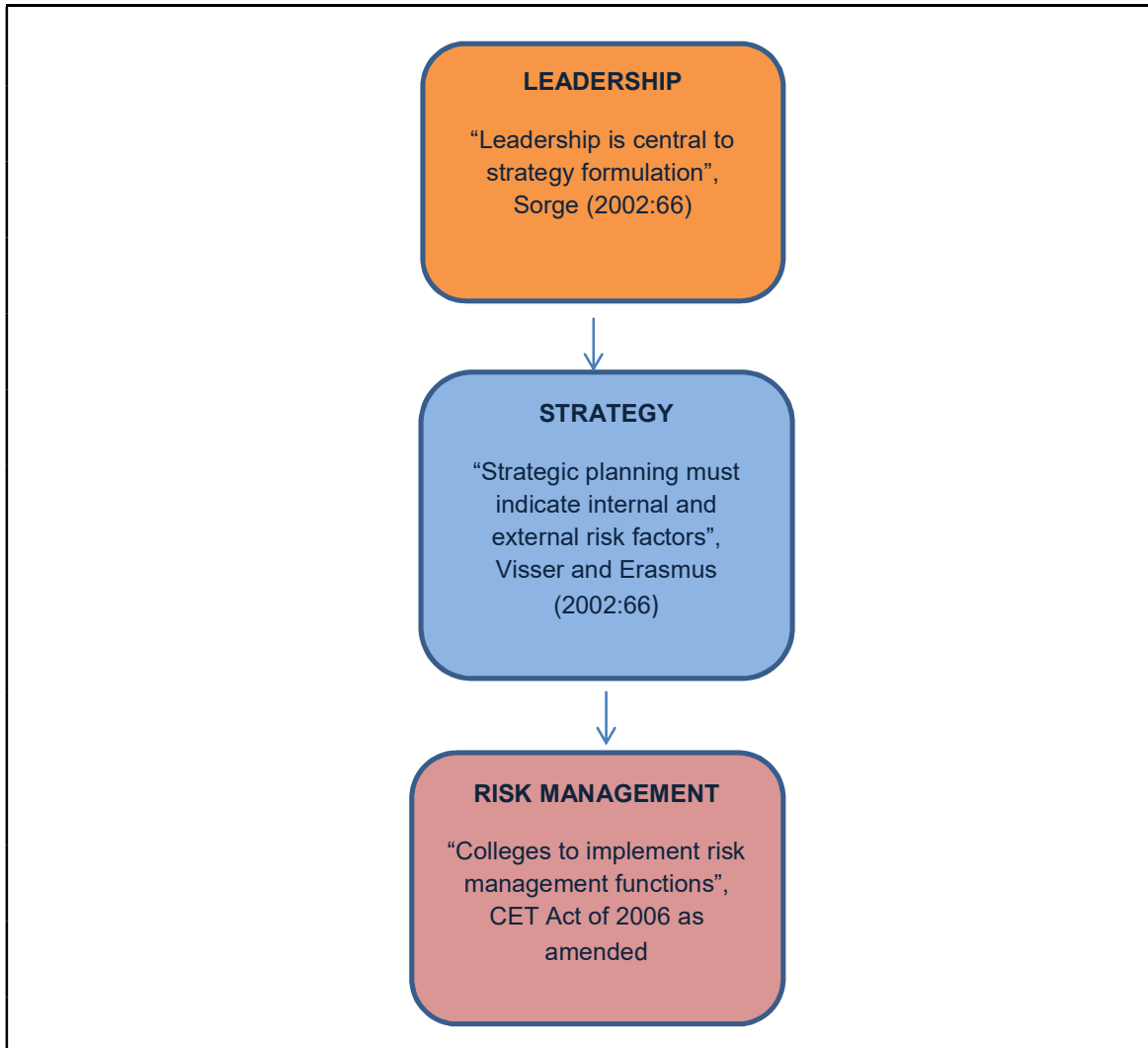
- Performance standards in the employment contract between the accounting officer and the executive authority; and
- The effective, efficient and economical use of the resources of the institution in carrying out his or her responsibilities.”

It can be said that as a result, the public sector cannot be managed without planning and must consider the extent to which government provides services and the effect of its spending on society and the economy. The strategic plan must oblige Public Service Regulations and have the approval of the executive authority for the institution. This long-term plan must take into consideration the existing environmental circumstances of the country, economic growth patterns, availability of capital, unemployment rates and the obtainability of resources which will fast-track economic development, social growth and greater provision of services to communities. For this reason, Visser and Erasmus (2002:66) recommend that strategic plans have specific design criteria and must identify the following:

- The nature of the core business as undertaken by the institution;
- Desired objectives and outcomes of the institution based on legislative and constitutional mandates;
- Strategies and key outputs for the planned delivery of the proposed objectives;
- Key measures, milestones, service delivery intentions and key indicators relating to how the desired outcomes are to be assessed;
- Resources, investment capital, skills development, systems and funding requirements for the delivery of the objectives;
- Internal functions performed by the organization and those that will be outsourced;
- Indication of key risk factors, both internal and external, of the organization that would affect achievement of strategic outcomes; and
- Other factors relevant to the realization of the objectives as approved by the institutional authority.

With reference to the suggestions by Visser and Erasmus, it is discernible that the College needs to identify internal and external risks as part of its strategic planning requirements. The illustration that follows represents the ‘Genesis’ of risk management.

Figure 3.1: Risk Management ‘Genesis’



Source: Author's Perspective

The illustration above reflects that strategic management processes emanate from strategic leadership. It is further observed that the function of strategic management provides the impetus for risk management. Ndlela (2007:1) refers to Deloitte and Touche (2005) who in turn refer to organizations which are increasingly reflecting how risk management is integrated into their strategic planning process, organizational structure and how they interact with other activities like audits and quality management. Based on this deduction concerning public sector leadership and strategic management, the TVET College through its strategic leadership processes has to obligate itself by implementing a risk management strategy.

3.3 A CASE FOR RISK MANAGEMENT

Over the preceding years and as the international financial crisis unfolded, risk management came under scrutiny, not because it had failed organizations but because of its “absence from strategic and other decisions.” It is emphasized that “good risk management is fundamental to good business management.” It is about prospects and threats and necessitates flexibility to adapt to a swiftly fluctuating risk environment: risk management has emerged as a discipline in its own right, as purported by Blunden and Thirlwell (2010:xii).

It is suggested by Hendrikse and Hefer-Hendrikse (2012:352) that every business within a context of business or industry in which it operates has its own, unique risks. It is an essential part of strategic and operational management to identify these risks, develop controls to minimize or manage them, and monitor and report on these risks through an effective structure. The management of risks or risk management is at the heart of corporate governance drawing from corporate governance principles to make the right decision to eliminate or minimize risk.

Young (2008:2) remarks that risk management is a value-adding function concerned with consistent awareness and continuous enhancement which “impacts directly or indirectly on the bottom-line performance.” Over the years, there has been amassed attention on risk management due to the complexities of organizations due to their products and services; the advancement of new technologies; increased susceptibility of organizations to operational failure and losses and the extension of business internationally.

As business risk intensifies, so too does the business impact. An example of this is when a business outlays financial resources and the translated risk becomes very high based on potential loss. Sometimes business risk is quantified in “missed opportunities” when customers access services from other service providers. The greater the potential loss, the greater the risk which is followed by a higher business loss, thereby resulting in the managing of risk being critical, as outlined by Carkenord (2009:330).

Business has always been associated with uncertainty, and organizations are beginning to recognize that the effective management of risk can make a significant contribution to business improvement. Risk management has evolved from the reactive “tick-box” routine to the more proactive activity which is part of the strategic management process. Risk management is that activity when implemented minimizes the impact of adverse events and

enhances the returns from new opportunities in the maintenance of the organization's competitive advantage, CIMA (2002:3).

From the above discussions, there are two concepts that come to light: the first is risk and the other is risk management. It becomes imperative that these concepts are defined as these are the core elements of the research which were applied in addressing the effectiveness of the College's risk management strategy.

3.3.1 Conceptual perspectives of Risk

According to CIMA (2002:7), risks are opportunities and dangers associated with uncertain future events. However; if an outcome is certain then there is no risk. Risks are the potential events that could influence an organization's achievement of strategic objectives. Robbins and DeCenzo (2005:124) state that risk is a probability that a particular outcome will result from a given decision, or it is the assigning of probabilities to outcomes which may arise. Sawyer and Dittenhofer (1996:402) contend that there are numerous barriers that management will encounter in the accomplishment of business objectives; these barriers are referred to as risk. Robbins (2000:70) mentions that risk is a condition where the decision-maker has the ability to estimate the likelihood of outcomes, while Hendrikse and Hefer-Hendrikse (2012:352) refer to risk as "threats that undermine an investment asset or an enterprise." Robbins and Coulter (2003:162) state that risk is a condition where the decision-maker estimates the likelihood of outcomes.

Kerzner (2006:709) refers to risk as a measure of the probability and consequence of not achieving a defined goal. This also involves a notion of uncertainty. The author further suggests that risk has the elements of probability and impact of the occurring event. Visser and Erasmus (2002:214) point out that risk is a likelihood that inaccuracies will occur or the probability that an action or event may critically affect the public institution. Such events may include unethical conduct, financial loss, reputational loss or legislative non-compliance that may prevent the realization of business objectives. Valsamakis *et al.* (2013:32) define risk as a "deviation from the expected value" implying a presence of uncertainty where the event produces a loss or uncertainty. Therefore, the concept of risk is a condition that has elements of probability, loss, inaccuracies, adverse effect or impact and uncertainty as

reflected in the definitions above. This view is supported by Holton (2006:22) where the author states that risk is “a proposition of which one is uncertain.”

3.3.2 Theories of Risk Management

The other key concept, risk management, will be expounded based on the interpretations from various subject matter experts.

Risk management is the act dealing with risk that includes risk planning, risk assessment, risk handling strategies and risk monitoring. Risk management should be proactive rather than reactive, which endeavours to lessen the likelihood of an event happening and its impact as pointed out by Kerzner (2006:712). Risks are potential events that can prevent the organization from achieving its strategic objectives. A process for understanding such events and creating plans to mitigate the possible threats or opportunities is referred to as risk management. This process is becoming part of the business strategy aimed at enhancing organization-wide performance, as highlighted by CIMA (2002:11).

It is pointed out by Young (2008:25) that risk management aims to identify and establish a structured approach to the management of risks which envisages achieving a risk management environment, cultural awareness, roles and responsibilities and a common understanding of risk in the organization. The risk management process is a “systematic application of risk policies, procedures and practices through the identification, evaluation, control, financing and monitoring of risks.” Cunningham and Cordeiro (2009:346) support Young (2008:25) that a crucial approach of operationalizing risk management is through the development of concise policies and procedures. Cunningham and Cordeiro (2009) also quote Shoop and Dunklee (1992), who refer to risk management as a “coordinated, effective preventative and post-event response...developed through planning, organizing, leading and monitoring...”

Visser and Erasmus (2002:198) refer to McKinney (1995:180), who defines risk management as a “comprehensive and systematic approach aimed at identifying, measuring and controlling an entities exposure to accidental loss, theft, and liability involving human, financial, and physical and natural resources.” They further refer to the critical components of risk management, which are a centralized trained unit, policies and a record keeping system.

The authors reflect that the risk management process includes the identification of risk, the measurement and evaluation of risk, the control of risk and lastly, risk financing.

The definition of risk management is also cited by Valsamakis *et al.* (2013:13), who reference it as “a managerial function aimed at protecting the organization and its people, assets and profits against the physical and financial consequences of risk. It involves planning, coordinating and directing the risk-control and risk-financing activities in the organization.” The process further involves strategic decision-making meeting the requirements of processes and people, in terms of protecting the people, assets and its profits through a process of employing competent staff.

Jackson, Sawyers and Jenkins (2009:37) refer to risk management as a “systematic approach to identifying and managing risks.” Entities need to ensure that they comply with regulations and the law to ensure that they “avoid damage due to their reputation.” The company needs to clearly reflect on its risk appetite when identifying and assessing its goals. As a result, the establishment needs to detect and manage risks throughout the business enterprise, at all levels, and within each business unit. Jackson *et al.* (2009:37) say that risk management is a “difficult task.” The process to identify risks, then measure it in order to attain an assessment of its likelihood and potential impact on the organization presents great challenges in risk management.

Risk management is a “security process” to manage uncertainty by assessing the different kinds of risks to expect, developing strategies to managing each risk and mitigating the risk by the use of resources. The aim of risk management is to reduce the various risks as much as possible in the organization, as emphasized by Addison, Brown, Daffy, Storer and Young (2008:100). The degree of organizational success or failure is proportional to the extent of risk management where the organization has the capability to control, manage and minimize the risk. Therefore, effective management translates to effective risk management which is at the core of the responsibility of management who take full cognisance of business risk exposure, as highlighted by Hendrikse and Hefer-Hendrikse (2012:351).

The above definitions of risk and risk management will form the fundamental concepts for discussions in understanding how the TVET College implements its risk management strategy. The strategy, according to Aloini, Dulmin and Mininno (2007:549), aims at reducing risk situations and the treatment of risks after it has originated. It is observed that the above proponents of risk theory refer to risk management as a systematic function, a

managerial function, a structured approach of identifying and measuring exposure and a decision-making function. These strategic concepts provided the basis for analysis of the extent to which risk is implemented in the College.

3.3.3 Sources of Risk

Jackson *et al.* (2009:37) remark that risk management must consider the organization's overall risks rather than isolated "silos" of risk. These organization-wide risks must be considered by the management as it affects the decision-making process and strategic outcomes of the College. Addison *et al.* (2008:101) state that there are various sources of risks that may impact on the business environment, such as:

- External risk;
- Financial risk; and
- Organizational risk.

External risks emanate from outside the organization which cannot be controlled by the business such as:

- Economic risks – through the impact of interest rates, inflation and exchange rates such as the rand being affected by international currencies like the dollar and the euro. The College is not a financial or business institution where economic risks can have an effect;
- Infrastructural risks – through electrical power supply interruptions, service providers being unreliable, unreliable business relationships and dependency on outsourced functions like technology. This source of risk poses a challenge to the College since it is dependent on continuous electrical supply in the assessment process such as examinations, where for example, computers are being utilized. Service providers could pose a risk when they do not supply the correct outsourced items such as engineering equipment;
- Legal and regulatory risks – brought about through the change in laws as required by government that could affect rates and property taxes which impacts on operational planning. This risk does not affect the College directly as the College is a state entity with increases of rates not impacting negatively on the College;

- Environmental risks – the demand for the consumption fuel, increased pollution and effects of climate change having a financial impact on the business. These factors do not have a direct impact on the College’s functionality;
- Political risks – risks resulting from changes in government, policy and leadership which impacts on business. Political risk does have a direct impact on the College as the College is a state organization which is influence by the Provincial and national actors in the public administration system. An example of this is the change of legislation such as the Further Education and Training Act of 2006 which has changed to the Continuing Education and Training Act of 2006, where Colleges have become a national priority instead of being Provincially controlled;
- Market risks – through the impact of supply of raw materials, competition and demand for merchandise and services. The College is a state educational institution and is not affected by these risk factors; and
- ‘Act of God’ – these are uncontrollable risks such as natural disasters like earthquakes. Businesses need to insure themselves against such disasters to minimize their impact. As a result of this risk, the College has insurance policies to protect itself against these risks.

Financial risks are brought about by:

- Budgetary risks – when budgets are prepared it is assumed that the financial resources will be readily available for operational needs. This is a huge risk for the College since the College is dependent on state subsidies. The College has experienced operational challenges when DHET does not issue the subsidies timeously;
- Theft, shrinkage and fraud – such activities results in financial losses which are difficult to plan for. However, plans need to be place to mitigate such risks through the development of policies and procedures as developed by the College. The supply chain management policy is an example of a policy developed to control this risk;
- Capital investments – investments made to improve business operations which can sometimes result in unprincipled decisions which could be costly for the company. As an educational institution, the College’s core function is education and training and would not be directly affected by this risk as a financial institution including a bank would; and
- Liability risks – brought about by legal action against the organization needing mitigation against costly legal actions. This risk does pose a threat to the College as

the College can be sued by staff, students or visitors or failing to provide a safe environment which health and safety legislation dictate. As a result, the College is in possession of liability insurances.

From the above, it can be concluded that the College is not exposed to economic, environmental, market and capital investment threats as its core function pertains to education and training of people.

Organizational risks may result from the following pertinent aspects:

- Project risks – due to ineffective monitoring of project planning and management where the inability to adhere to deadlines can result penalties such as construction work being undertaken in the College;
- Operational risks – where risks result from a process or procedure not being followed accordingly, which could result in the incorrect function be implemented such as wrongly registering a student in the correct level;
- Health and safety risks – affecting staff through the outbreak of flu, thereby affecting the teaching and learning process;
- Information – the inadequacy of appropriate information for decision-making which could affect the success of a business such as reporting on College progress;
- Reputation – a business needs to act swiftly due to reputational risk which can affect the image of an organization, thereby effecting loss in student enrolments and a community's? educational development;
- Technological – businesses today depend on various forms of technology to achieve its objectives for production processes, financial management and customer service. Challenges in technology could pose a risk whereby the College server crashing could be an inability to undertake administrative functions such as emails and communication with College stakeholders;
- Innovation – companies exploit innovative ways to make rapid profits. Sometimes these innovations are “gimmicks” which could have a negative impact on the business. As much as the College needs to be innovative in its operations for continuous improvement, this does not affect profit margins for the College as it is not a financial business enterprise; and
- Personnel – due to the organization's inability to find the suitable staff to undertake required functions as it may be difficult to find suitable candidates for positions. This

could affect the operational plans of the business. Suitably qualified staff to lecture the students is paramount to their success.

From the above discussion regarding organizational risks, it can be observed that these threats are a challenge for the College as they directly affect its operational ability to function effectively and efficiently.

It is affirmed by Hendrikse and Hefer-Hendrikse (2012:352) that the above types of risks are relative to the type of business sector in which the organization operates. Based on the types of risks being identified, it is an essential part of the business strategy through the risk management process that controls are developed to minimize the impact of these risks and that these risks are reported on through monitoring and evaluation processes. Flynn (1997:284) states that “the nature of the environment in which a company operates” is the principal source of risk.

3.3.4 Models of Risk Management

As proposed earlier by Jackson *et al.* (2009:37), risk management is a systemized approach in identifying and managing risks. The table below reflects how advocates of risk management perceive the risk management process:

Table 3.1: Risk Management Models

Hendrikse and Hefer-Hendrikse (2012:363)	Young (2008:330)	Valsamakis (2013:106)	Rejda (2011:45)
Establishing the risk context; Risk identification; Risk assessment and evaluation; Risk control; Risk monitoring Risk reporting.	Risk identification; Risk evaluation [assessment and measurement]; Risk control; Risk financing Risk monitoring [including reporting].	Risk identification; Risk measurement and evaluation; Risk control; and Risk financing	Identification of loss exposure; Measure and analyse loss exposure; Combination of techniques to treat loss exposure Implement and monitor the risk program.

Source: Author’s Perspective

By analysing and comparing the above models of risk management, it can be observed that risk identification, risk measurement and evaluation, risk control and risk monitoring are all

common phases in most risk management models. However, the model proposed by Hendrikse and Hefer-Hendrikse (2012:363) contains “Establishing the risk context” as an extra risk management element. Therefore, this approach or model will be used as a reference for researching the risk management strategy at Elangeni TVET College. This model, apart from all the others, takes the risk context or risk environment into consideration before embarking on identifying risks. This model undertakes a scan of the risk environment which serves as the foundation for other risk management processes to follow.

3.4 THE RESEARCH RISK MANAGEMENT MODEL

It is imperative that the College considers all components of the risk management process, as highlighted by Hendrikse and Hefer-Hendrikse in the previous discussion, to effectively manage its risks by interacting with all mechanisms of its operational sphere. This model is unpacked below; there-after each risk management process is comprehensively discussed.

- Establishing the risk context [scanning the risk environment];
- Risk identification;
- Risk assessment and evaluation;
- Risk control;
- Risk monitoring; and
- Risk reporting.

3.4.1 Scanning the Risk Environment

Valsamakis *et al.* (2013:15) state that a fundamental task of the risk manager is to align the risk management goals and objectives with the mission and values of the organization. This therefore, requires the risk manager to reflect on the mission of the organization, and take into consideration all components of the organization with regard to how it interacts with the risk management activities. Sorge (2002:96) also affirms this by remarking that “in the strategic decision-making process, environmental scanning is a part of the overall functioning of the organization.” CIMA (2002:16) points out that the risk profile of the entire organization must be considered which links to the concept of the risk scanning of the organization’s environment looking at all components of the organization as a starting point

in the risk management process. Risk scanning is a way of determining how effectively the risk culture is embedded within the organization. Jackson *et al.* (2009:4) affirm that an organization's policies, procedures, and organizational structure are a representation of the control environment which is part of the risk management environment.

Young (2008:46) asks the question: "How should organizations approach the institutionalization of risk management?" This question has the implication that the College needs to conduct some form of reflection as to where it is in the risk management process, how its management views the managing of risk and lastly, how to embed the risk culture into the organization for sustainability. This means that the College would conduct a form of scanning of its operational environment, how it approaches the risk management process and how it sustains the continuity of the risk culture in the College. An oversight of its effect could lead to material impairment and losses for the College. As a result, the drivers for operational risk management need to be known. These drivers in the form of internal, external and management influences can be observed as the initial point in the realization of the risk management function. This would in turn develop the risk management strategy.

Internal drivers or influences happen as a result of actions and activities that are implemented to manage the operations of the organization efficiently. The business strategy is executed to influence systems, staff and processes which is observed as a driver of operational risk and must be managed to warrant a viable business. External drivers originate from external establishments and influences and affect the organization through regulatory obligations, market events and competition. Management drivers include performance measures, accountability, risk awareness and monitoring processes to name a few, which influence the risk management process. The promotion of risk awareness by management could influence the improvement in how the organization is managed. As a result, management must create an environment of control and thereafter identify and manage the operational risk. Management must now decide on their approach in implementing the risk management strategy which will require a step-by-step methodology in order to gain buy-in from the organization, as suggested by Young (2008:47). Successful roll-out of the risk management function requires careful planning by carefully considering all the drivers of operational which entails reflecting on or scanning the business environment.

Valsamakis *et al.* (2013:139) state that "it is important to explicitly identify and embed a risk management culture for the organization" and refer to Haubenstock (2003:257), who defines

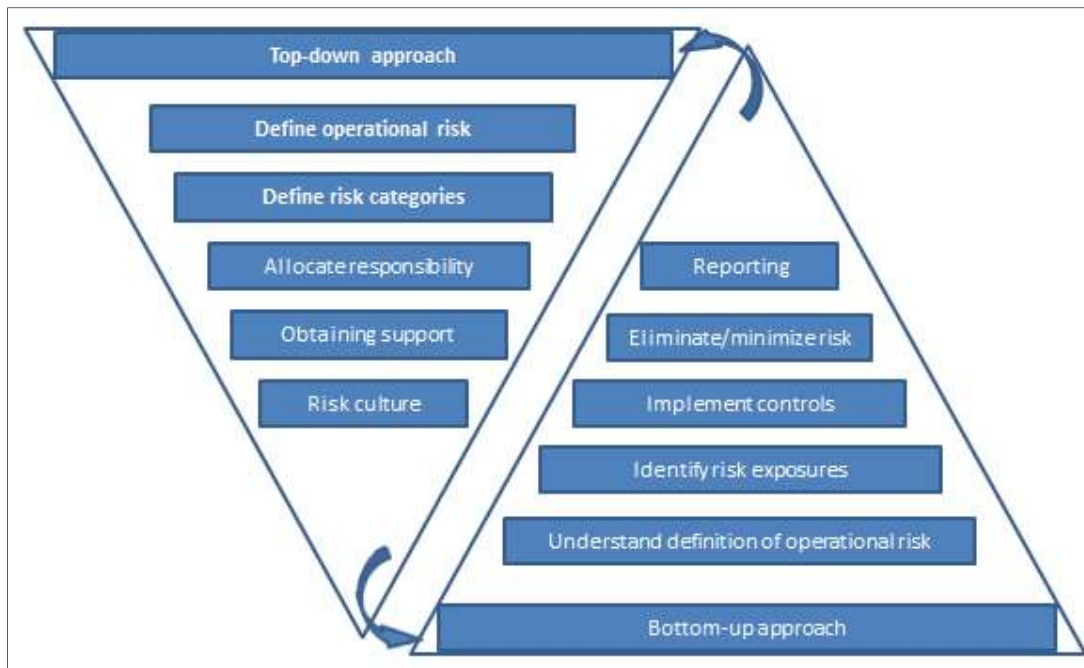
risk management culture as a “set of shared attitudes, values, goals and practices that characterize how the organization considers risk in its daily activities.” The risk management culture must ensure that all staff at the various levels of the organization are involved in the development of risk management processes. It is imperative for staff to understand the communications procedures regarding risk reporting and decision-making. There needs to be an ethics code of conduct concerning risk management which must be known to all staff. Levels of authority should be known to all staff in order to facilitate the risk management processes.

Risk exposures are recognized and addressed effectively through the involvement of skilled staff who must receive relevant training on risk management. Valsamakis *et al.* (2013:140) mention that the external environment in which the business functions should also be observed and evaluated to ensure that internal processes meet or exceed business expectations. The need for policies and procedures is a pre-requisite to ensure that the organization adheres to regulatory and legal requirements in a business environment that is continuously evolving. Young (2008:50) also reiterates that role-players in the risk management process must be identified and trained to ensure that the objectives of the risk management function are achieved.

In order to entrench the management of risk in the organization, the development of a structured approach is necessary. This is achieved through the management approving a formal structure with a clear strategy for the management of risk processes. Management has to ensure that the correct staffing and budgets are in place for such a structure. Applicable tools, methodologies and risk models must be identified so that definitive and cost-effective techniques of reducing or eliminating risk may be applied for proactive risk management processes. CIMA (2002:17) mentions that a “risk management group” should be created to facilitate and co-ordinate the risk management process. The function would be to inform, advise and bring awareness regarding the risk processes; but must be multi-disciplinary in its formation for effectiveness.

The design of the structure has an influence to the approach of managing risks. Young (2008:49) suggests the top-down approach and bottom-up approach, which is demonstrated in the illustration below:

Figure 3.2: Risk Management Approaches



Source: Young (2008:48)

By referring to the above illustration, the top-down approach is where decision-making takes place by the board of directors for the risk strategy to be implemented or operationalized lower down the structure of the organization. This level entails the formulation of operational risk processes and categories, the assigning of responsibilities, garnering support from the senior management and lastly, setting the scene for the evolution of a risk management culture. The bottom-up approach involves staff throughout the organizational spectrum with a view for them to understand the risk management concept. If a risk occurs, it is important that it is managed close to the exposure in order to prevent an adverse effect or minimization of its effects necessitating the involvement of staff at the lowest levels of the organization. Here, staff are able to identify and categorize the risk exposure within their areas of responsibilities. This approach ensures that management obtains the most accurate form of information in order to implement the most precise control measures.

It is of vital importance that College stakeholders embrace the risk management culture in order to have the same shared values to achieve College objectives. A trained and skilled staff complement will ensure that there is an understanding of the internal and external drivers of risk in order to identify and control such threats. The College environment must have a structure

to manage its risk strategy. These components of the risk environment were analysed in the research process to test the efficacy of the College's scanning of the risk environment.

3.4.2 Risk Identification Functionality

Risk identification follows scanning of the risk environment which entails relevant College stakeholders meeting to identify potential threats that may hinder the College from achieving its strategic mandate from DHET.

3.4.2.1 Perceptions in risk identification

Risk identification according to Young (2008:53), is the initial point of the risk management process. Valsamakis *et al.* (2013:107) also concur with the preceding statement by Young and further state that risk identification is "the most important step in risk the management process" and is sometimes "neglected" in relevant literature. During the risk identification process, the risk that an organization is exposed to is determined. CIMA (2002:23) emphasize that the first stage in the process of developing risk management is risk identification where key risk exposures are established. The risk identification process must provide a sound foundation in order to include risks at all levels of the organization. The risk management process is set in motion by the risk identification process, as risk cannot be managed if it is not identified first. Therefore, it is regarded as the most important role in risk management and must be approached in a methodical way.

Management has to realize that as the organization expands and improves so too will its risk exposure; it is a vital precursor to the management of risk. As a result, risk identification is an important facet of the risk management process. Risk identification provides a significant underpinning for the organization to depend on in terms of articulating corporate strategy. Therefore, it can be seen that there is inter-dependence between risk management and organizational strategy. Alexander (2003:247) refers to risk identification as a risk map detailing which of the risks applies to any business, process or organisational unit and to what degree. Degree refers to severity and the frequency of the risk. Risk identification must also include the monitoring of the external environment and trends.

According to Young (2008:54), risk identification is a proactive approach to managing operational risk that an organization would be in a situation to nullify or minimize the

negative impact of a risk occurrence when it does occur. CIMA (2002:26) mention that the risk identification process not only detects current existing risks, but also provides an opportunity for the organization to identify new emerging risks. Once an organization has determined its risk exposure, its management can implement strategies to transform the exposure to a positive risk outcome or event. The author emphasizes that risk identification is approached systematically through:

- Considering the strategic and operational intentions of the organization, the risk drivers, important success realization factors and threats and opportunities related to the attainment of these objectives; and
- Evaluating organizational processes with an intent of identifying the important risks that stem from these processes.

It has been observed by viewing the College strategic plan, that the institution has identified risks that were associated with each strategic goal. Importantly, this organization considered its operational processes during its risk identification exercise, as found in the College risk register. This is in accordance with the recommendations of CIMA as reflected above. This is also in accordance with Alexander (2003:247), who proposes that risk identification is an underpinning function in articulating organizational strategy. The College risk register highlights that the College fulfilled the recommendations by CIMA (2002:23) by identifying risks at all levels of the College system.

3.4.2.2 Risk identification processes

Risk Identification is an integral consideration; therefore it is important to define the aim and fundamental objectives of this process. Such objectives cannot be achieved without a risk identification process, which could comprise one of the following:

- ***Continuous risk identification process*** – this is method where risk identification is considered as an on-going process to facilitate the identification of risk exposure on the corporate strategy. As conditions change in the business environment, it becomes imperative that the associated risks be considered and understood as they may negatively impact on the attainment of the business strategy. This process is part of the continuous risk management process;
- ***Once-off risk identification process*** – this involves the identification of operational risk during a process so that the viability of a proposed business pronouncement is

proactively determined. This can, for example, take place during the design and development of new products, technology and services.

It has been observed that the College has implemented the “once-off risk identification process” to identify its risk which was coordinated by an external audit organization. This process also entailed a brief workshop on risk management before the risk identification exercise commenced. Once a risk identification process has been determined, it is followed by the risk identification method.

3.4.2.3 Risk identification methods

Risk identification methods are numerous; therefore it is improbable that a particular method will be adequate for the identification of all organizational risk exposure. Based on this proposition, a combination of approaches is used for the identification of all risk exposure. An underlying factor that must be considered is that risk identification is an on-going process where identified risks need to be observed and new risks emphasised. It is imperative that a systematic procedure is implemented for the identification of risk exposure to ensure that potential risks are incorporated for further study. Significant risks can be identified through various methods through the use of:

- Brainstorming sessions;
- Workshops;
- Interviews and discussions;
- Questionnaires;
- Checklists;
- Loss history; and
- Process flow risk exposure.

Blunden and Thirlwell (2010:90) concur with the above methodology for the use of workshops, questionnaires and interviews. It is also recommended for the implementation of second round interviews for the sharing of combined risk information. The method implemented must be appropriate for the determination of the process. The author recommends that the use of workshops is a better choice if all role players can be present. Questionnaires could be made use of where attendance may be a problematic. Risk process mapping has also demonstrated to be a standard method in risk identification processes.

The above methods are biased, as they are dependent on the experience and verdict of the people who participate in the process of risk identification. Based on this subjectivity, correct identification of the effect [impact] and probability [likelihood] of risk events arising becomes difficult. In spite of the subjectivity of the above methods for risk identification, these have been demonstrated to be invaluable to business organizations in highlighting risk consciousness, monitoring and tracking risk and measuring the financial consequences, as explained by Young (2008:55).

It is recommended by Heldman (2005:47) that with regard to the implementation of any of the above techniques, it is important to have the relevant group of participants as the process will only be effective with the knowledge-base of the participants. Valsamakis *et al.* (2013:121) mention that it may be improbable that one particular method in identifying risks will be adequate in identifying all risk exposures. It is recommended that a combination of techniques be applied so that the identification of risks is as comprehensive as possible. Certain identification methods will suit certain industry or business where wide range participation and consultation would be advantageous.

The above process is now followed by a customization of the method to ensure an organized approach to the risk identification method, bearing in mind the following:

- Identify the business area to be analyzed;
- Choose relevant staff to partake;
- Develop the layout to serve as a parameter;
- Engage a the services of a proficient facilitator;
- Ascertain the inherent risks; and
- Select measures to reduce or eliminate the risks.

The College is in compliance with the views of Valsamakis *et al.* (2013:121) as it has undertaken some of above functions, such as choosing a facilitator to coordinate the process of risk identification, the involvement of the full management and the identification of its risks coupled with associated controls. This was found by inspecting its risk register.

The table below illustrates how risks are identified and coupled with the appropriate control measures:

Table 3.2: Risk Identification with Controls

RISK IDENTIFICATION	
IDENTIFIED RISK	CONTROL MEASURE
Loss of IT information	IT policies and procedures Use of updated anti-virus Back-up of server daily
Supply Chain fraud	Policies and procedures Segregation of duties Rotation of functions

Source: Adapted from Young (2008:62)

From this illustration, risk identification enables the business environment to detect risk exposure, as well as inherent risk which can impact of the achievement of the business strategy and operational objectives. Risk identification is a proactive approach in operational risk management where preventative controls can be implemented to prevent the adverse impact of such risks. Vasamakis *et al.* (2013:121) also state that risk identification is an on-going process and not viewed as a “once-off” application requiring a fair degree of creativity and lateral thinking. Heldman (2005:7) also concurs with the author by mentioning that risk identification takes place “throughout the life of the project”, as every project phase generates its own opportunities and challenges thereby creating the opportunity for risk management. The risk identification process is then followed by risk assessment and evaluation, which is a precursor to risk control.

3.4.3 Risk Assessment

The third phase in the risk management model is risk assessment, where identified risks are evaluated for levels of severity and the likelihood of their occurrence. This discussion below provides perceptions of the concepts of risk assessment by proponents of risk.

3.4.3.1 Perceptions in risk assessment

Risk assessment is the “qualifying” and “quantifying” of inherent risks. The inherent risk is evaluated to determine the potential severity and likelihood of risk events, taking into consideration the effectiveness of the risk controls. The evaluation process results in residual risks which are the risks that remain after risk controls are implemented, as described by Valsamakis *et al.* (2013:145). This involves the process in which the organisation can determine how it is doing regarding risk exposure, how it is controlling these risks as well as how it monitors the risks. Improvement processes must be identified with the relevant personnel to carry out these actions, (Alexander, 2003:248). The assessment process can be a narrative process of bringing managers together to discuss risk exposure and gaps in the risk management process.

Jackson *et al.* (2009:5) recommends that a business should implement measures to identify and assess risks that can hamper its ability to successfully undertake business operations. The continuously fluctuating economic, regulatory, industrial and operating circumstances make it obligatory for management to frequently assess risks presented by the changing environment conditions.

CIMA (2002:18) emphasizes that after operational risks have been identified, “an assessment of the possible impact and likelihood of occurrence” should be undertaken using reliable parameters that will permit risks to be ranked. Reuvid (2005:48) is in agreement with CIMA (2002), who refers to risk assessment as a process to calculate the “probable” impact of risk on the business. Young (2008:60) refers to “the determining of possible or potential risk impact” as risk evaluation. It can therefore, be concluded that risk assessment and risk evaluation refer to the same variable or are referenced similarly in terms of determining possible impact and likelihood of possible risk exposure. Young (2008:65) refers to the evaluation of risk as “a process where one assesses operational risk in terms of the likelihood of operational failure and the severity of a potential loss.” This assessment, according the author, should contain options available to management with regard to approving appropriate actions to diminish the risk.

Sawyer and Dittenhofer (1996:402) mention that risk assessment is the process of identifying and analysing of relevant risks in relation to the attainment of business objectives. Management uses risk assessment as part of ensuring the success of the organization. Risk assessment is an important mechanism for the development of new systems, whether

technological or process-driven, for the attainment of business objectives. As a result, it becomes imperative to recognize or identify what actions or events that could preclude the system from achieving its outcomes. It is also pointed out by Sawyer and Dittenhofer (1996:412) that the assessment of risk, the risk control system and the business objectives are inseparably tied together and impact on each other. The risk assessment process measures risk exposure regarding the business's operational, financial reporting and compliance objectives attainment. Operational objectives are assessed in the areas that pertain to efficiency and effectiveness of the organization's operations, productivity goals, performance and the preservation of the resource loss. Risk assessments are conducted on the presentation of reliable published financial statements which includes fraud prevention and financial reporting. A risk assessment is also undertaken in the area of compliance objectives, assessing the adherence to regulations and laws in the environment in which the entity operates.

Risk assessment or the "assessment of the impact of risk" should not only consider the financial impacts, but must also consider its impact on the organization's capability to function as well as the impact on its reputation. It must also be cognizant of the political and commercial understandings that are associated, as expounded by CIMA (2002:28). Risk unlike uncertainty, though, can be "measured by utilizing available data from past practice and can be evaluated through statistical measures, analysed and used for predictive purposes" as outlined by Marx, De Swart and Nortje (1999:48).

Young (2008:61) states that "risk evaluation is an assessment and measurement of the identified risk exposures with a view of managing and controlling the risks that could negatively influence the business strategy and achievement of objectives." In the process of risk management, the quantification of risk exposure is crucial as this measurement relates to how it can be managed. It may not be possible all the time to quantify a risk and the risk may be designated qualitatively. As a result, risk exposure is evaluated quantitatively where it is expressed in numerical terms and to determine the potential impact on the organization. The emphasis is on the frequency and severity of the risk incident. Risk is measured qualitatively through rating scales to determine the impact and likelihood of the probable risk event. Valsamakis *et al.* (2013:16) concur with Young (2008:65) that risk assessment is a process of quantifying the identified risks with the intention of determining their impact on the business.

An understanding of the fundamentals of risk assessment would assist the researcher to effectively analyse how the College undertakes this key function in the risk management process.

3.4.3.2 Risk assessment process requirements

The goal of risk assessment is described by Chapman (2006:147) as an assessment of risks and opportunities in terms of their probability and impact within the organization. Based on this proposition, the risk assessment process needs to satisfy the following requirements:

- The assessment of risks was comprehensive and inclusive of all risks as developed on the risk register;
- Skilled personnel were involved in the process to generate a well-informed assessment;
- Adequate time was apportioned to the assessment process;
- Consistency was maintained regarding probability and impact definitions; and
- Appropriate financial implications were considered for probability impact matrices.

By analysing the College's risk register, it was observed that the College had assessed the identified operational risks where management personnel were involved in its development. Risks were assessed reflecting probability and impact. It was critically noted that the College did not consider the financial implications of the identified risks, meaning that the risks were not assessed regarding their financial implications.

The above factors describe the sufficiency of the risk assessment process. It follows then according to Chapman (2006:152) that the risk assessment process incorporates the following activities necessary for the likelihood and impact of the risk event to be recorded on a risk register:

- Conception of and assessing the likelihood of the risk event arising;
- Assessing the risk impact or opportunity in comparison to the business objectives;
- Considering the inter-dependencies between each risk: how each risk affects the other;
- Documenting the assessment findings; and
- Updating of the risk register.

The updated risk register contains a full description of risks, their impact and the risk owner where each risk is assigned a reference number. These activities are process enablers for an effective risk assessment leading to informed decision-making. The College is observed to be complying with the recommendations by Chapman, as the risk register reflects that risks have been assessed for impact and frequency as well as their effect on other risks, such as the unavailability of teaching resources which affects the teaching and learning process which is in turn affected by the inability of the College receiving its subsidies on time from DHET.

3.4.3.3 Risk impact and likelihood

Valsamakis *et al.* (2013:16) comment that these terms refer to an accepted measure of risk as a combination, where impact refers to the potential consequence or severity of the risk; whereas likelihood refers to the frequency or how likely the potential risk would occur. Risk evaluation is the assessment of loss exposure where the emphasis is on “how frequent and how severe” the events are likely to inhibit the business strategy. This process considers “expected average loss and maximum possible loss” which is a continuous process as risk is constantly changing. The assessment process considers the financial health of the organization to ascertain its risk-retention capacity with the aim of determining the impact of a specific risk relative to the organization’s financial capacity.

The assessment of risk considers an evaluation for likelihood (frequency) and impact (severity) where likelihood views how frequently a risk event will occur over a given period, and is presented for example as a percentage. Impact is reviewed on the basis of the possible cost to the business entity due to the risk event. Risks can also be assessed by using terms such as ‘expected’ and ‘unexpected’ when referring to severity and likelihood. Expected levels are associated where reference is made when the usual effectiveness of controls are applied. Unexpected levels are associated with information when an amount of capital is required to withstand a “financial shock” through a risk event, as described by Blunden and Thirlwell (2010:77).

The effect of a possible risk refers to “the potential reputational, financial and other damage which is evaluated either through quantitative or qualitative means.” as outlined by Young (2008:62). The author further states that the assessment of risk must consider the “financial impact, the impact on the organization’s viability to operate and the impact of the achievement of business objectives”.

A qualitative approach is used below to demonstrate risk impact:

Table 3.3: Risk Impact

Scale	Impact
High	Fiscal impact is above the threshold value resulting in a major impact on the organization's ability to function
Medium	Fiscal impact is at the threshold value resulting in a moderate impact on the organization's ability to function
Low	Fiscal impact is below the threshold value resulting in minimal impact on the organization's ability to function

Source: Adapted from Young (2008:62)

The likelihood of a risk occurring is assessed by taking into consideration the current organizational conditions and processes that are in place to control or restrict the opportunity of the risk event happening. The valuation of the likelihood or frequency of the risk event arising is described in terms of:

- High relating to a probability;
- Moderate relating to the possibility; and
- Low relating to a remote chance.

The table below illustrates the likelihood of a risk event:

Table 3.4: Risk Event Likelihood

Assessment	Description	Indicators
High	Probable – more than 50% likelihood in a year	Has occurred several times over the last 2 years due to external influences
Moderate	Possible – less than 50% chance of occurrence in a year	Has occurred once over the last 2 years due to external factors but mainly through internal influences
Low	Remote chance of occurring – not likely to happen over the next 10 years	Has not occurred in this country

Source: Adapted from Young (2008:63)

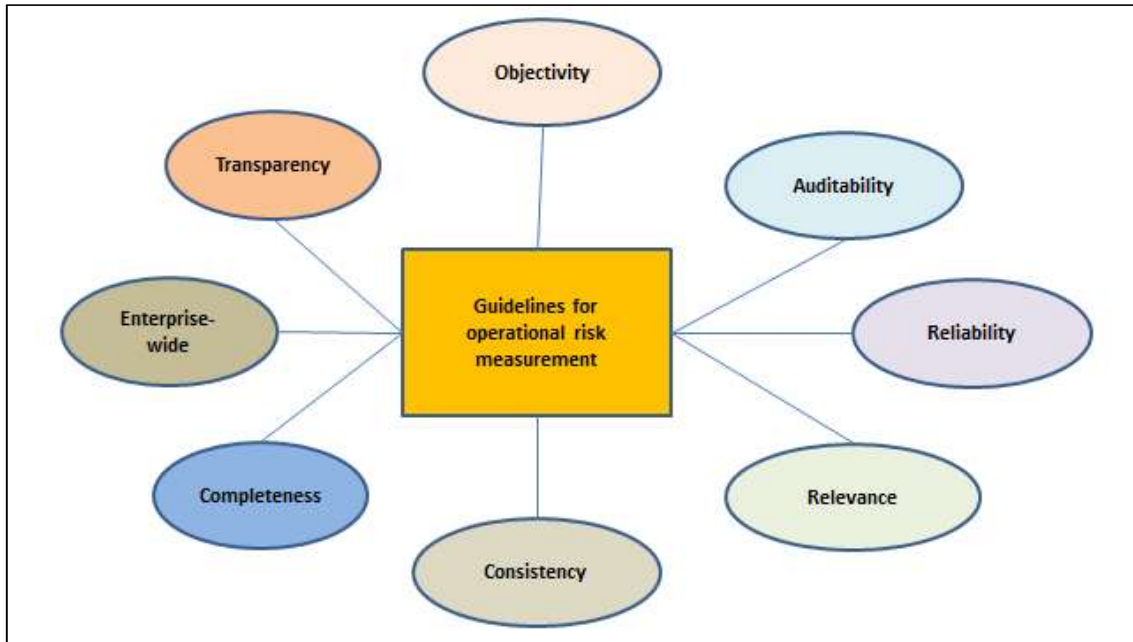
Following on from the previous discussion, Blunden and Thirlwell (2010:77) comment that qualitative assessment presents a “range of values” but not actual figures which are descriptive such as high, medium and low. Quantitative assessments contain only figures even though ranges may be used like 10 – 20% to reference for example likelihood. Most organizations commonly use quantitative assessments as it presents more objective information.

The risk event is characterized by its impact and likelihood. To reduce the impact of a risk effect once it has happened is a reactive response, while reducing the likelihood of the risk occurring is a proactive response. The College has implemented controls to reduce the likelihood of certain risks by introducing policies and procedures like a petty cash policy. The policy reduces the likelihood of fraud based on roles and responsibilities identified in the policy. This is a proactive response in reducing the likelihood of risk.

The risk evaluation process aims to accomplish the roles of enabling a technique of treatment as well as assessing the consequence or degree of success following implementation of the treatment. The chosen method must also ensure that it is able to identify and describe the risk exposures, the risk factors and potential losses and its associated links. The control measures for high frequency/low impact and low frequency/high impact events must also be determined followed reports on measurement results that will serve in decision-making for management.

Clear guidelines must be established in the organization for appropriate and accurate measurement of operational risk by applying standpoints, which are illustrated by the diagram below:

Figure 3.3: Risk Measurement Guidelines



Source: Young (2008:67)

For a structured approach to measure operational risk, Young (2008:67) proposes the following recommendations:

- The first step is the gathering of information which is required to perform an assessment of all the significant risks which would have been done during the risk identification stage. The College obtained this information from the institutional management meeting minutes internal and external audit reports, client evaluation reports, input from council sub-committees such as the Planning, Infra-structure and Resource Committee and from the College budget plans mentioned;
- The second step is the analysis of the risk exposures and other information as gathered earlier. This analysis is achieved by the implementation of an assessment framework. The level of risk exposure can be indicated by different colours like red, yellow and green where red indicates a high risk level and green indicates low risk. The control measures must also be evaluated and can be rated numerically, where 1 indicates ineffective control; 2 indicates partially effective, and 3 indicates totally effective.

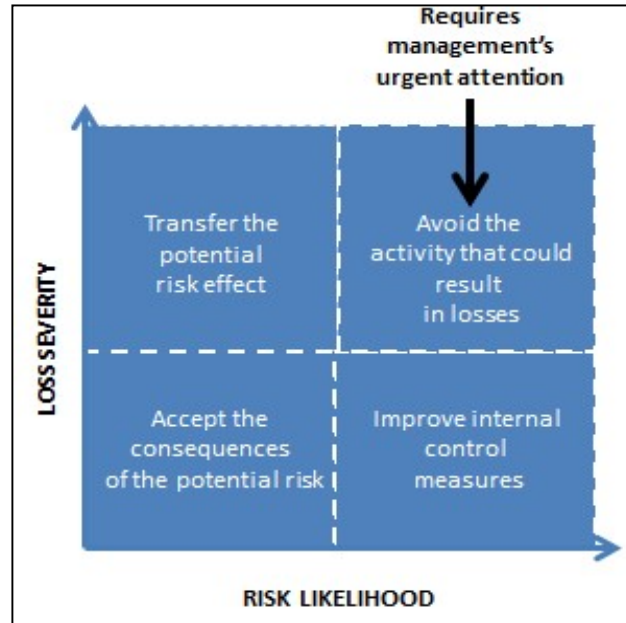
Residual risk is the risk that remains after implementing control measures to the original risk state. This is a product of the rating of control measure and the probability rating. When the residual risk rating is high, it requires immediate management attention and proactive decision-making. This second step determines the potential impact of the risk event and the likelihood of the risk occurring as expressed in a numerical value, such as low risk: 0% - 10%; medium risk: 10% - 80% and high risk: 80% - 100%. When quantitative data is unavailable, the qualitative approach may be used to generate a risk rating. These ratings of College risks have been observed in the risk matrix schedule;

- The third step entails a review of the residual risk in order to validate the risk data which is done through a comparison of the overall result with that of historical trends. Past loss events can be used to compare current assessment results. Where there is substantive disparity of results, an internal audit review can be undertaken to assess for validation of the results obtained; and
- The last step is a formal reporting of the final assessment of the operational risk to the organization. This is undertaken to provide better information to the management in risk management decisions. Reporting is a form of reflection on the extent of exposure of the risks analysed which later informs what control measures need to be instituted and at what costs. It is evident by viewing Audit and Risk Committee reports that the College has been complying with risk reporting. The outcomes from this committee are tabled at College council meetings, as reflected in the council meeting minutes.

It is evident that the College has been implementing the structured approach as recommended by the author in the preceding discussion to measure operational risk.

The diagram below illustrates the assessment of the likelihood of a risk occurring and the impact of the loss for an organization:

Figure 3.4: Risk Likelihood and Severity



Source: Young (2008:70)

By considering the diagram from Young (2008:71), losses due to risk exposure are described as expected losses anticipated during a time period which fall into the high frequency/low impact category, while unexpected losses are experienced in extreme cases which fall into the low frequency/high impact category. An important aspect in the measurement of operational risk is the quantification of risk influences which defines the extent of the operational risk. Measurement of risks functions as a basis for the establishment of control mechanisms to minimize or prevent the potential operation risk.

The benefits of the measurement of risk assist the organization to identify the potential exposure of operational risk. Risk measurement serves as a platform for management to make cost-effective decision-making on where to calculation of the cost of the operational risk can be made. This process also ensures that the cost of risk does not outweigh the benefits arising from the management of the risk exposure. According to Ross, Westerfield, Jordan and Firer (2001:609) a basic instrument for classifying and measuring risk exposure is establishing an organizational risk profile, where for example, to manage financial risk, managers need to

identify the categories of price variations that have the utmost impact on the worth of the business.

In order to implement an effective risk assessment process, Reuvid (2005:205) highlights that risk managers need to be cognizant of the following risk assessment pitfalls:

- Undertaking the assessment process in order to justify a previously made decision;
- Taking decisions on the basis of individual inputs when organization-wide input is needed;
- Considering risks from only one activity;
- Ineffective utilization of consultants;
- Inability to involve groups of people in assessing whilst not using people with the correct experience and skills;
- Inability to recognize all hazards regarding a specific activity;
- Inappropriate use of data, risk criteria and cost-to-benefit analysis; and
- Inability to effectively use the results of the risk assessment.

The above is a reflection of poor risk assessment practices which is a liability and can lead to poor decision-making, which could be catastrophic for the organization. Effective risk assessments utilize “systematic and disciplined process and approach” which is implemented by proficient personnel who generate findings to inform risk management decisions, Reuvid (2005:205). This is also supported by Valsamakis *et al.* (2013:16), who states that this process “requires the expertise in several disciplines and to use various techniques which necessitates the interacting of several organizational units.”

In conclusion, risk evaluation is the assessment and measurement of the identified risk exposure, where quantitative and qualitative data is used for successful evaluation in a consistent manner as a means of keeping the organization aware of the magnitude and intensity of the potential risk scenario.

3.4.4 Risk Control

The risk control function follows the risk assessment process, where risk control encompasses a variety of techniques that are implemented for the treatment of risk exposure.

3.4.4.1 Risk control insights

Risk control is a process which is developed to facilitate action to eliminate or reduce the likelihood or impact of a risk event. The risk control process is recommended to be set the same time as the risk is identified, which aims to mitigate the risk event, as observed by Blunden and Thirlwel (2010:83) and supported by Alexander (2003:248). Some control measures include management oversight roles, the introduction of policies and procedures and other monitoring processes. Best practice implementation is also a control measure as practised by organisations, according to Alexander (2003:248). Hence, the research will look at the intensity and ways in which the College implements some of these control measures. Young (2008:88) says that risk control comprises activities that are intended for the determination of eliminating or reducing the reasons that may negatively impact the strategic goals, could cause loss to the organization.

Jackson *et al.* (2009:5) mention that control activities are the most visible element of internal control within the organization. The control activities are made up of the entity's policies and procedures with the aim of reducing identified risk. Some of these controls include the safeguarding of assets, segregation of duties and independent review of work. Valsamakis *et al.* (2013:155) refer to risk control as "a method of countering risk" which includes activities to eliminate or reduce the causes of losses to the organization or minimizing the actual losses after preventative measures are deemed ineffective. There are three probable responses to a risk event, *namely*, risk acceptance, risk transfer and risk mitigation. To illustrate, student strike action is a threat to the College where, as a result of the strike action, damage to property can result. This is a form of risk the College can accept. Risk transfer is demonstrated through the use of service providers by the College to undertake services like the provisioning of photo-copy services as the liability of the machines is the responsibility of the service provider. Risk mitigation is a form of control through the implementation of College policies and procedures to facilitate and control staff recruitment.

Such controls should reduce that loss when it happens, and when preventative approaches have not been completely effective. Risk control is therefore, viewed as mechanism for the

mitigation of operational risk. A well-supported risk management program is a prerequisite for effective risk control, which is informed by a well-defined risk strategy in line with the business strategy. Of importance is the identification of control measures for the risk exposures. Young (2008:88) proposes that risk control measures can include the generation of policies and procedures, operational internal controls, management intervention in the form of decision-making, reporting and the development of an organizational structure to support the process. These controls measures, however, have to be aligned with the over-all business strategy.

3.4.4.2 Risk control techniques

Rejda (2011:470) mentions that risk control is the selection of a combination of techniques for the treatment of risk loss or risk exposure. Such techniques would reduce the severity of losses or provide funding for the losses. The following are major risk control techniques:

- Avoidance – this refers to a current loss exposure that is abandoned or when the loss exposure is never attained, such as the use of indemnity procedures where in this case, the College indemnifies itself against risk exposure by not being liable for others' inappropriate actions. The College avoids probable legal liability here. Sometimes the organization may not be in a position to avoid all losses;
- Loss prevention are measures that reduce the frequency of certain losses, for example, zero tolerance for alcohol abuse in order to reduce accidents in training facilities such as mechanical workshops where the lecturer can injure him/herself;
- Loss reduction is measures that reduce the severity of a loss event, such as the use of sprinkler systems used for fire protection; and
- Risk financing – techniques that afford the imbursement of losses after occurring such losses as commercial insurance, where it has been observed that the College infra-structure and assets are insured, demonstrating the concept of risk financing.

The purpose of control measures is to warrant the minimization of consequences of damages that may arise due to impending risk, the control of an antagonistic event in advance and lastly, the inhibition of loss. Young (2008:88) proposes three types of risk control measures which can be implemented to mitigate operational risk:

- Detective controls are used to ensure that the loss event is identified as soon as it occurs, to control the effects that a risk may have on the organization and to install preventative measures which would prevent a re-occurrence;
- Preventative controls are measures that are implemented to prevent a loss event from occurring, such as the separation of functions in a finance department to prevent fraud; and
- Contingency measures to ensure sustainability of the business once a risk has occurred, such as an external IT back-up procedure in the event of a fire within the organization.

The College is in agreement with regard to the propositions made by the author above. It is noted that the College has an external site where its IT functions are backed up as a contingency measure. Detective controls are evident through the implementation of policies and procedures, while preventative controls are demonstrated by the separation of finance and supply chain functions.

3.4.4.3 Risk control objectives

The objectives of risk control programs are described by Valsamakis *et al.* (2013:163) through the following intentions:

- Reduction of the “magnitude of losses” – this involves a calculation of the degree of exposure with an understanding of identifying and executing action plans to reduce the value of the exposure. An example would be to purchase back-up equipment to overcome the break-down of technology; and
- Reduction of the “frequency of loss-producing events” – this process is independent from the above process. It deals with a thoughtful analysis of loss causes, which is followed by the use of strategies and measures to eradicate these causes. An example of this would be periodic testing of technology and equipment.

In spite of risk controls having these characteristics for effectiveness, it can by no means be without flaws.

Risk mitigation choices will be influenced by the strategic direction of the organization with regard to accepting or avoiding high risks in order to achieve business objectives.

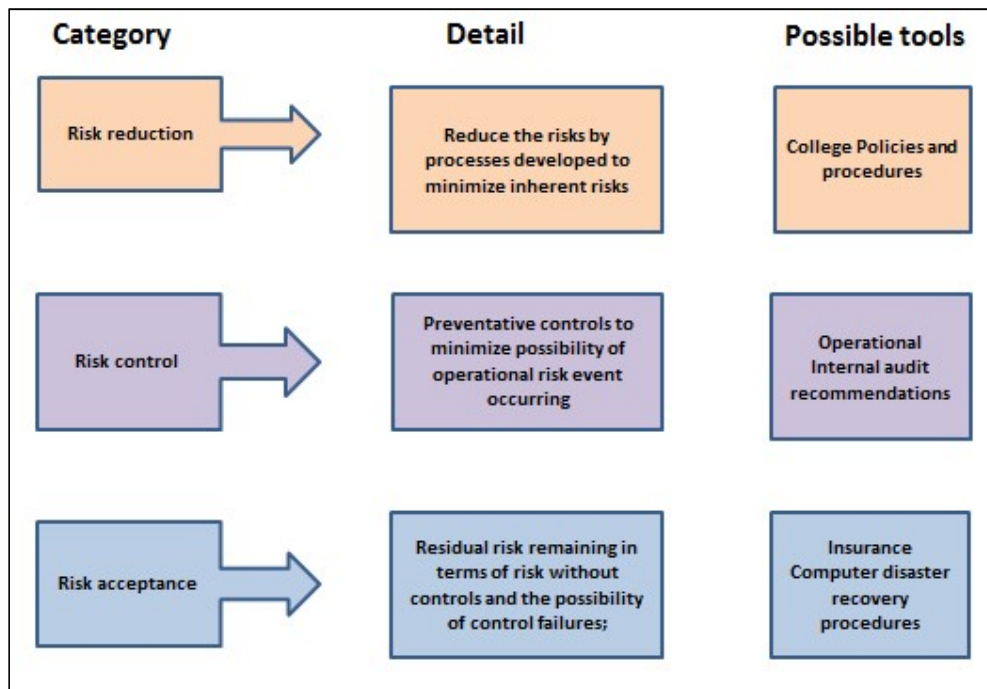
Risk mitigation, according to Young (2008:91), is therefore categorized as follows:

- Risk reduction where the initial response from management is to reduce the risk exposure of processes which can be brought about by re-engineering or restructuring of such processes. An example of this is the implementation of a new IT system which can be risk-assessed before actual implementation;
- Risk control measures being implemented to eliminate risk exposure or decrease the effects should a loss event arise; and
- Risk acceptance which arises due to the necessary risk controls being unable to completely control the risk exposure, the residual risk that remains.

It is to the benefit of the College to be aware of the various categories of risk mitigation to provide the College with different options and methodologies to control identified risks. Mitigation choices could have financial implications for the College and by being aware of this consequence, the College can execute a decision in choosing the appropriate type of risk mitigation method.

The diagram below illustrates risk mitigation methods as discussed above.

Figure 3.5: Risk Mitigation Methods



Source: Adapted from: Young (2008:91)

There are fundamental principles that Valsamakis *et al.* (2013:162) allude to regarding risk control, where it is recommended that there must be an “identification and application of

management principles to risk control.” It is stated that there should be a rigorous effort to assess risk exposure and related losses. Risk control must take into consideration significant attempts at loss prevention while distinguishing the impact of losses in the organization by integrating risk control approaches within the normal operations of the organization. Figure 3.5 reflects the tools the College utilizes to respond to specific types of risk control categories.

3.4.4.4 Risk control methods

Information security and business continuity management are two very significant control methods in management of operational risk. These methods of control, based on their importance, are provided with separate structures of management in various organizations.

Information security risk management: Top management’s responsibility, as part of its governance obligations, is to ensure that the organization’s resources are well-protected. Based on this, information security risk management has become an integral responsibility in the College. The consequences of ineffective information security management may result in unreliable information, breach of privacy and the unattainability of appropriate information. This would compromise College operations since communications and flow of critical information occurs among nine operational sites. The strategy for information security risk control is supported through the generation of College policies and procedures, and specific roles and responsibilities of individuals who oversee the implementation of the control program.

Business Continuity Management: This control method concerns the ‘rescue’ from an initial reaction through to the actual risk event and eventually to full ‘salvage’ of the business in the case of a disastrous occurrence. Business continuity necessitates the development of “strategies, policies, standards and procedures that govern management, implementation and control of people, processes and systems related to the contingency strategies.” as described by Young (2008:93). The author further comments that the business continuity approach provides the organization with the prospect to quickly decide on the potential impact of a catastrophic occurrence, and to provide an alternate means and systems which can be implemented to warrant that the organization can continue to operate when faced with the catastrophic event. An example of this process is the availability of off-site backing-up of IT data. The use of other campuses for teaching and learning is a contingency employed by the College in the case of infrastructure disaster. There is a need for management to be pre-

emptive and to formulate contingency plans should the event occur. These plans need to be reviewed regularly as the business environment is continually under-going a process of change.

3.4.4.5 Planning loss recovery

As part of its objectives, risk control processes also include the planning to deal with loss circumstances and to “recover” from such losses. Contingency planning deals with recovery from a loss-producing event where there is implementation of a predetermined plan in the event of a certain loss. This plan must warrant recovery from the loss event within the shortest time in the most economical manner. As a result, contingency planning consists of financial and non-financial facets of recovery. An example of contingency planning is the identification of an alternate service provider as a substitute when the preferred supplier is unable to render that service, as suggested by Valsamakis *et al.* (2013:164).

3.4.4.6 Components of risk control

In order for the College to be effective in its risk control function, Young (2008:96) cites the following components or pillars of risk control:

Organizational Structure: The modern approach in risk management involves the formation of risk management structure or a fundamental risk function which is a governing body to ensure that effective and over-all risk management occurs. In the case of the College, this governing body is the Audit and Risk Committee, which oversees the implementation and monitoring of strategic functions such as the audit and risk management processes. It is an oversight structure that reports to the College council regarding its strategic progress. The College senior management facilitates all risk-related recommendations from this committee. The purposes of the central risk management function can comprise the development of policies, processes, systems and standards with reporting mechanisms. This function is aided through the conducting of research, review processes and endorsement of risk management practices and models to ensure the application of best practices.

Policy and Procedure Development: These are generated to confirm that there is discipline and standards within the institution which aim to ensure the focus on the operational objectives and strategies. The risk policy must define the organization’s approach to risk management with the relevant roles and responsibilities which are approved by a governing body such as a board of directors for implementation. Such policies and procedures must be

reviewed regularly and updated to meet the requirements of the changing processes within the organization to enact the organization's business strategy. The risk management policy must be consistent with the organization's vision, mission and management culture. Through the development of procedures which are documented and communicated throughout the organization, operating procedures are used to ensure that the risk policy is being fulfilled. The use of the policy is a means of ensuring management's visions on specific business-related actions. The developed risk policy and procedures act as a parameter to business unit managers on how to manage their risks, and is a control measure to decide how effectively such units are managed. Successful policy deployment is enhanced through on-going staff training, review processes and effective monitoring of processes, Blunden and Thirlwell (2010:88) support Young (2008:94) by also referring to a control or "pillar", meaning directive controls which provide a gradation of direction for the organization's representative of policies, manuals and procedures. Although the College has a Quality Management System which contains all relevant policies and procedures of the institution, it lacks the risk management policy and associated procedures. This therefore, limits the control function in risk strategy implementation.

Internal Controls: After the development and approval of policies and procedures, internal controls must be formulated to ensure the successful enactment of the risk policies and procedures. Internal controls permeate all levels of the organization. The intentions of internal controls warrant an observance to management's policies and procedures for the achievement of effective and efficient work processes with a view to safeguard the organization's resources and assets. The College has a Quality Management unit which undertakes operational internal audits to test policy and procedure compliance in accordance with ISO 9001 quality standards. Internal controls bring about a systematic execution of business activities in agreement with relevant regulations for the production of reliable and dependable financial and management data. This necessitates an appropriate control structure with well-defined control activities on every business level which in the case of the College would be the function of the Quality Management unit. Control measures include the segregation of duties in order to prevent the conflict of interest in certain work processes such as in the case of finance and supply change functions, where these are two distinct units and function separately from each other. Operational communications is necessary for the dissemination of critical operational compliance information which could affect the organization internally or externally, such as communicating results from internal and

external audits. There must be effective monitoring activities to ensure the efficiency of the internal controls and where deficiencies are identified to be remediated immediately.

Risk Reporting: Risk status is reported both internally through the College structures and externally to other stakeholders. Internal reporting of risk occurs between the Audit and Risk Committee and the College senior management, which takes place once every quarter. The outcomes from the Audit and Risk Committee are reported to the College council on a quarterly basis. The senior management engages specific risk owners regarding outcomes from the risk identification exercise. Accurate information and availability of statistics is a requirement during reporting to ensure effective decision-making where the identification, evaluation and control of risks are highlighted. Risks can be reported daily, monthly, quarterly or annually, dependent on the needs of the organization. The objectives of risk reporting bring about an awareness of risk exposure and the provision of risk information that will inform risk management processes for effective decision-making. The illustration below depicts the “pillars” or components of risk control as explained above:

Figure 3.6: Components of Risk Control.



Source: Adapted from Young (2008:94)

The deliberations demonstrate that risk control is a vital part of the risk management process which brings about the minimization or eradication of the effects of operational risk exposure. It can be seen that effective risk control is dependent on the organizational structure, College policies and procedures, internal controls and regular risk reporting. From the illustration, it can be seen that the College has as part of its organizational risk structure a Quality Management function, Audit and Risk Committee and the College Council. Risk

management control is enhanced by policies and procedures which provide the system for risk control. The internal controls are supported through the implementation of internal audits. Risk management progress is reported at senior management, Audit and Risk Committee and College Council level. The four pillars represent how the College responds to risk control.

3.4.5 Risk Monitoring

Risk monitoring is a continuous process which is vital in assessing the status of risk exposure identified in the College system to ensure effectiveness of the risk management strategy,

3.4.5.1 Risk monitoring interpretations

The process of observing the progress and effectiveness of risk controls through the application of action plans is termed risk monitoring. It is vital that this critical function is embedded within business processes and is part of the risk management culture of the organization. Risk monitoring is like “an early warning” system that enables the business to become more aware regarding new risk exposure, thereby prompting proactive management by implementing control measures to minimize the effect of the risk should it occur, as alluded by Valsamakis *et al.* (2013:143).

Risk monitoring is a process that provides insight into the level of risk exposure. It also looks at the efficacy of control measures and whether there are changes in the organisation with regard to business processes which inherently affect the level of risk exposure in that area of operation. New business processes is an opportunity to identify new risks. Risk indicators are a method of supporting risk measurement and risk monitoring as emphasized by (Alexander, 2003:250). The frequency with which an organization monitors its risk profile is dependent on the nature of the risks to which the business is exposed to, as well as its ability to “fine-tune its risk-taking activities”, as highlighted by Culp (2001:211).

Young (2008:114) states that risk monitoring is a vital part of risk management and is a continuous process. It is also proposed by Young that organizations must have an internal mechanism to monitor its risks and controls. The monitoring process informs management about the organization’s risk profile, how changes within the organization affect the risk profile and what must be done to protect the organization against risk exposures. The

monitoring process is an early warning system to identify potential risks which could inform management about impending financial loss for the organization. Monitoring is a management and supervision function which involves quantitative measurements and qualitative assessments of operational risk exposure. It is an assessment of the quality and appropriateness of mitigating measures which ensure that the adequate internal controls, systems and processes are established to minimize or eliminate the cost of risk. Monitoring is a process implemented to ensure the effectiveness and efficiency of the risk management system and strategy through an operative reporting mechanism.

According to Rejda (2011:54), the monitoring of the risk program commences with the risk management policy statement which enables an effective risk management program. The policy statement outlines the objectives of the risk management program of the business. This policy provides authority for the risk manager to undertake the risk functions and creates awareness to top-management regarding the processes of risk management. The organization's risk management manual describes in detail the risk management program and is also part of the initial stages of the monitoring process. For effectiveness, Rejda (2011:54) proposes that the risk management program must be "periodically reviewed and evaluated to determine whether the objectives are being attained." It is further stated that the risk manager must conclude whether the organization's risk management policies are being upheld.

The business environment is continuously undergoing change which influences the risk management processes, which are adjusted according to the environmental changes. Such changes are established through continuous monitoring activities. All stages of the risk management process are monitored continuously for effectiveness originating at the risk identification stage, where exposure is determined. Risk reporting is another important facet to monitor in the risk management process to ensure that management is provided with accurate and necessary information for decision-making. It is imperative also to monitor whether identified risks have been financed so that they can be managed through, for example, instituting insurance mechanisms to protect the organization from potentially high operational losses, as recommended by Young (2008:115).

It is observed that the College lacks a formal risk monitoring structure which could impact negatively on whether risks are controlled or eliminated, thereby impacting the risk management process negatively. The only form of monitoring occurs at senior management meetings, Audit and Risk Committee meetings and at College council meetings.

3.4.5.2 Risk monitoring objectives

According to Ile, Eresia-Eke and Allen-Ile (2012:21), the monitoring exercise is a way of ensuring that “activities and programs” are progressing towards achieving the intended results outlined through a plan. It is stated that monitoring ensures that activities comply with the plan whilst ensuring optimum use of resources. It is a process that informs management of progress made and the manner in which desired outcomes were achieved. Through the monitoring function, valuable information is generated regarding input, outcomes, outputs and environmental dynamics for decision-making purposes. It is an “early-warning” system tracking areas for attention where re-planning of processes can be executed to achieve the desired objectives.

The evaluation process is monitored to evaluate whether the risks are suitably assessed and measured and whether the correct methods for evaluation are implemented like the risk and control self-assessment system. The monitoring exercise also confirms that the optimal internal control measures are implemented for the elimination and control of identified risks. Monitoring aims to protect the organization against high impact/low frequency events in order to prevent an impending catastrophic situation, as outlined by Young (2008:115).

It is also highlighted that the monitoring process promotes co-operation between the various business units. There is a higher level of predictability as it provides direction to management and compels management to look towards the future. This process eliminates crisis management as management anticipates certain outcomes after the monitoring exercise. It is a framework against which decisions can be assessed necessitating the reliability and accuracy of data to influence decisions, as expounded by Ile *et al.* (2012:28).

3.4.5.3 Risk monitoring methods

Effective monitoring must be cognizant of time, financial implications and quality. A fair amount time is required to judge the time required for a specific exercise so that the monitoring process is proactive, productive and effective. If the monitoring function is not effective it translates to a waste of time and therefore, a waste of finances. A culture of promoting quality practices should be adopted in the monitoring process where mechanisms like checklists, reviews, progress reports and action plans are engaged with to inform the monitoring exercise, emphasized by Ile *et al.* (2012:23).

A reaction system is required to support the monitoring of risks which will resolve that the corrective and preventative actions engaged are effective. This feedback system is to apprise all stakeholders in the risk management process whether or not the controls are effective through a process of reporting, briefings and information sharing. Feedback, according to Young (2008:116), is delivered through continuous and intermediate monitoring methods as indicated below:

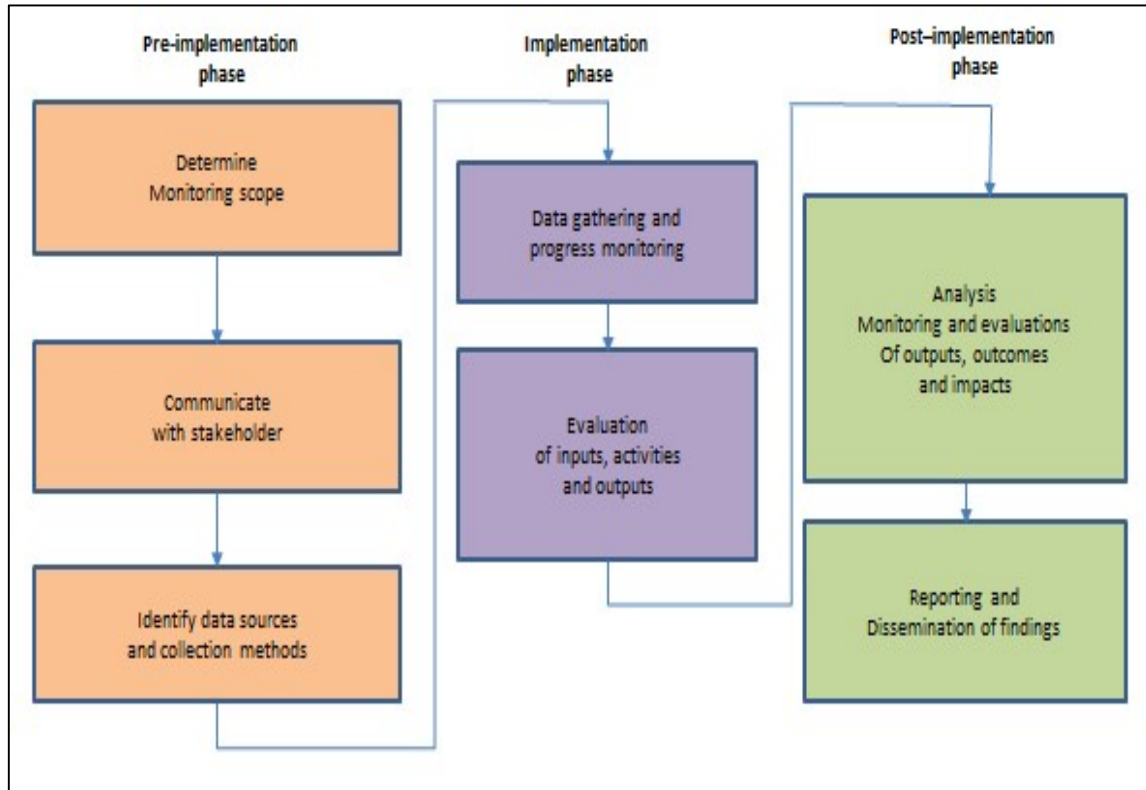
- Continuous risk monitoring is an “on-going” process implemented to determine the importance of risks, variations in the operational environment and the effectiveness of risk controls. This monitoring method ensues during the regular course of business activities by means of routine tasks, managerial activities and resolutions. Its advantage is that through this technique, a problem is identified on actual-time basis encouraging instant corrective actions; and
- Intermediate monitoring is founded on distinct evaluations taking place from time to time concentrating directly on “high risk areas and risk control effectiveness.” The monitoring exercise can be accomplished through, for example, questionnaires or self-assessments. The internal audit function is also a monitoring mechanism providing management with a reassurance that the risk management function is effective and supports the suggested objectives. Checklists, activity analyses and flow charts are other examples of intermediate monitoring. The ideal condition is an amalgamation of the both methods which would ensure that operational risk management is effective over a period of time.

By analysing the above monitoring methods, it was found that the College is practising or implementing intermediate monitoring functions in the form of operational internal audits, which is in agreement with the suggestions by Young. This measure could possibly assist the College in tracking its progress regarding risk management implementation.

Reporting is a central part of the monitoring process intended at communicating the deficiencies of the risk management process so that management can take the necessary remediation actions. These limitations maybe perceived, potential or real and may provide an opportunity to develop the current risk management process. Reports inform corrective actions and as a result, need to be accurate so that the relevant level of management can become responsive to the report findings resulting in the risk management process becoming highly effective. The monitoring system, therefore, should be flexible and simple so that

systemic anomalies can be observed by the generation of accurate, timely and reliable information, as remarked by Ile *et al.* (2012:21).

Figure 3.7: Monitoring Process Flow



Source: Ile *et al.* (2012:96)

This monitoring process flow depicts pre-implementation, implementation and post-implementation elements. In the pre-implementation process, the person responsible for monitoring needs to work with the person responsible for a specific management area where the monitoring intentions are communicated. Data sources are identified and the data collection methods are identified. In the monitoring implementation phase, data is gathered where inputs, activities and output variables are monitored. The post-implementation phase incorporates an analysis of data and the compilation of a report, as illustrated by Ile *et al.* (2012:96).

According to Young (2008:117), the focal objective of operational risk monitoring is the “evaluation of the effectiveness of the risk management process.” It also intends to provide management information on deficiencies that could negatively influence the achievement of business objectives. Risk monitoring aims to check the effectiveness of the risk management

constituents such as risk identification, risk control, risk assessment, evaluation and reporting, which endeavour to contribute to the attainment of the organization's business strategy.

3.4.6 Risk Reporting

Risk reporting is the final phase in the risk management process and seeks to target College stakeholders with information for effective decision-making.

3.4.6.1 Risk reporting principles

Blunden and Thirlwell (2010:21) mention that a reporting system needs to be established together with the development of a reporting culture and a common organizational risk language. Through comprehensive reporting, there may be an understanding of what is actually happening, and of the incidents that could threaten the organization by affecting continuous improvement and business objectives. Reporting transpires up and down the hierarchy of the business which needs to focus on the significant risks with risk indicators and that these risks are effectively co-ordinated so that the reports lead to action. Effective risk reporting generates management's involvement in the process of risk identification, assessment and control, thereby enhancing the organization's risk profile.

It is emphasized in Ile, Eresia-Eke and Allen-Ile (2012:147) that an essential part of monitoring and evaluation of programs is the reporting of findings as it intends to advance performance. As such, there is a need to document findings to improve present and future performance by creating a learning organization. Reports seek to educate the targeted stakeholders specifically to inform them of activities undertaken by using a choice of reporting methodologies. Reports aim to generate "constructive lessons" to support value-added performance through management improving the quality of decisions embarked on. Reports are communications tools and must be represented in a manner that is appealing to achieve the aims and intentions of the report.

3.4.6.2 Risk reporting effectiveness

Reporting techniques and styles include the use of bar and pie charts, 3D column and line charts and the use of dashboards. Dashboards produce a range of major information that can be viewed at once, reflecting risk, impact level, likelihood, controls and risk rating. As stated earlier by Merna and Al-Thani (2005:51), ensuring that people obey the risk reporting

protocols is critical to the process. Ile *et al.* (2012:148) support Merna and Al-Thani (2005:51) by stating that charts [bar, pie and flow], tables, graphs [line and scatter-plots] and other illustrations may be used to emphasize key concepts for the stimulation of visual interest.

Risk reporting is an end process in the risk management framework. Of course, after the risk reporting is done, there must be continuous monitoring by business owners in ensuring that the identified risk are controlled or eliminated. The key objective of risk reporting is to communicate the operational risk assessment across all business areas, (Alexander, 2003:253). Creating reporting procedures and ensuring that individuals observe such protocols is vital to risk reporting, as purported by Merna and Al-Thani (2005:51).

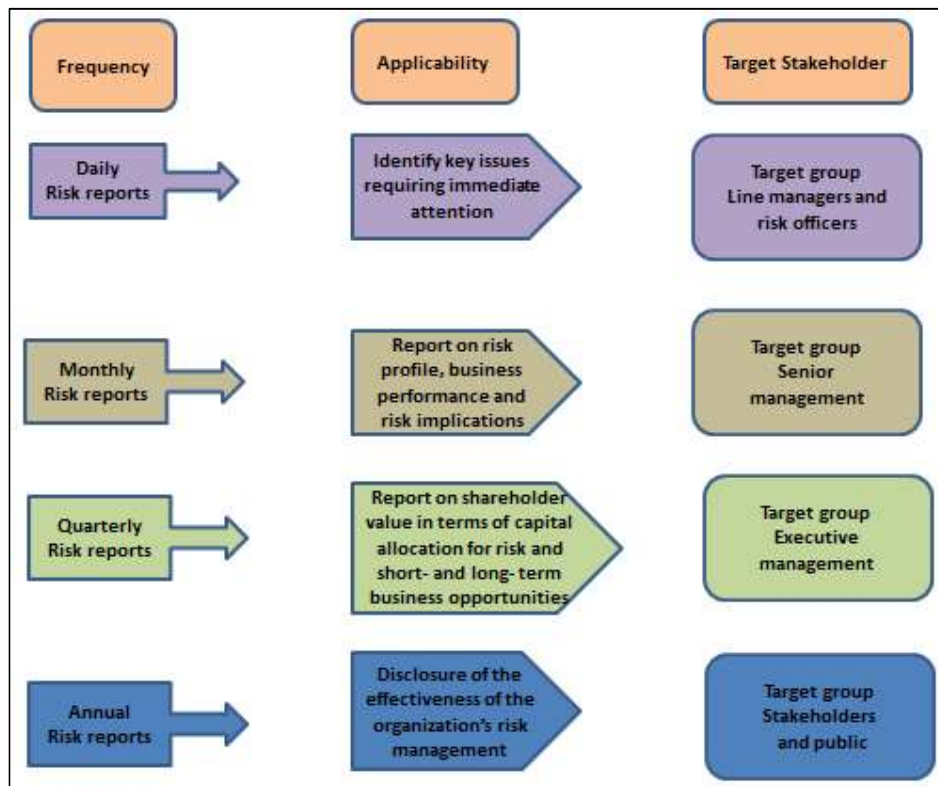
In many organizations, management operates and takes decisions based on the reports it acquires. As a prerequisite, reports need to be accurate, timely, economical and meaningful. Sawyer *et al.* (1996:107) recommend that an efficient internal reporting system must consider that:

- Individuals should be required to report on matters for which they are responsible for;
- Reports are generated with due responsibility;
- The cost and time consumed in generating a report must be compared against the benefits derived from such reports;
- Reports should reflect comparisons with standards of costs, quantity and quality;
- The compilation of reports needs to be simple and consistent with the subject matter and the use of common terminology;
- Reports must be timely for maximum value; and
- Recipients of reports need to be engaged regarding the necessity of receiving such reports and encouraging methods of reporting improvement.

By analysing Audit and Risk Committee reports that the College is observed to be implementing the suggestions of Sawyer *et al.* (1996:107). This College report is structured with specific matters to report on such as auditor's response to College risk management. It is generated by the senior management, thereby conforming to due responsibility and by the responsible parties. There is consistency observed in the report based on similar business language being applied. As mentioned in a previous section under internal controls, risk

status is reported both internally through the organization’s structures and externally to other stakeholders with a vested interest. Internal stakeholders of the College comprise the management, staff and students while external parties constitute officials from DHET, Sector Education and Training Authorities and College business partners. Accurate information and availability of statistics is a requirement during reporting to ensure effective decision-making where the identification, evaluation and control of risks are highlighted. The objectives of risk reporting bring about an awareness of risk exposure and the provision of risk information that will inform risk management processes for effective decision-making, maintains Young (2008:100), and it is further stated that risk reporting ensures that the correct decisions on risk control measures are made. Risks can be reported daily, monthly, quarterly or annually, depending on the needs of the organization as reflected in the reporting framework which follows.

Figure 3.8: Risk Reporting Framework



Source: Adapted from Young (2008:101)

Informed decision-making flows from good operational risk reporting, otherwise poor decision-making could have dire consequences for the business. Blunden and Thirlwell (2010:130) recommend that following needs to be considered for effective risk reporting:

- Relevance of the audience – risk reports may be directed to different stakeholders such as College management, staff, audit and risk committee members or the College council. Therefore, risk reports are required to be relevant to the stakeholders it addresses;
- Key message communication – It is essential that reports communicate the critical messages it intended doing by considering who would engage the reports;
- Key term understanding – management must continuously be made aware of the common language and terms that are used when communicating risk processes, ensuring that they are clear and in common use throughout the College landscape;
- Data quality – incomplete data collection leads to poor data quality leading to suspect risk reporting. Although such reports do produce some information, it should be treated with caution as this can compromise the risk management process; and
- Using qualitative and quantitative information – Stakeholders have a need for access to both forms of data for a complete understanding of the risk management processes.

“Good reports are an essential for good risk management” as outlined by Blunden and Thirlwell (2010:143) as vital information must be accessible and delivered in such a way so as to support informed decision-making on the risk profile of the business.

3.5 RISK MANAGEMENT AS A COLLEGE BENEFIT

There are substantial benefits for organizations which implement effect risk management programs. This process enables a business entity to achieve its pre-loss and post-loss objectives effortlessly. The cost of risk is reduced, thereby increasing business profits. Cost of risk is a management tool that measures certain costs such as premiums paid, loss control expenditure, insurances and outsourced risk management services. Based on direct and indirect losses being reduced, it is a benefit to society as pain and suffering is reduced, as observed by Rejda (2011:55).

When risk management is implemented in an organization that is dedicated to robust corporate governance and comprehensive ethical business principles, the methodology can be

very effective in the identification, dynamic management and utilization of positive risks and mitigation of negative risks. While the organization is aware of its risk exposure, the formation of governance structures and an ethical environment can benefit a business in its quest to be successful, as affirmed by Jackson *et al.* (2009:37).

Simplistically portrayed by Gregory (2001:29), the expected benefit of the risk program is that it prevents:

- Loss of production, business failure and legal liability;
- Worker fatalities, injuries and worker litigation;
- Litigation from regulatory authorities and related groups;
- Damage to branding and reputation;
- A loss of access to information, production stoppage and operational failure;
- Damage or harm to customers through the use of products; and
- Loss of assets, market share and intellectual property.

Risk and return are inter-related, therefore any reduction in the organization's risk profile results in an efficient "risk-return trade-off." An organization that implements a risk management program that reduces its own risks is reason for the existence of that business entity. The presence of a risk management system is an indication of good corporate governance, which inculcates confidence in investors and associated stakeholders, as remarked by Valsamakis *et al.* (2013:7, 87).

James (2015:4) comments on a survey that Deloitte undertook concerning strategic risk in South Africa, where it was revealed that a vast majority [81%] of companies are explicitly and aggressively managing strategic risks. The survey revealed that companies now viewed the long-term effects of risk and how it affected performance. Based on this, companies are integrating risk as part of their overall business strategy and planning processes for organizational effectiveness.

3.6 RISK AND ETHICAL DECISION-MAKING

Risk and decision-making, Smit, Cronje, Brevis and Vrba (2011:123,168) emphasize, is a major part of the function of a manager, and when making a decision under the condition of risk, the manager will not know the outcome of each decision in advance. As a result,

management's attitude to risk influences strategy selection. Where management's attitude favours risk, the range of strategic choice expands; where a manager is risk-averse, the strategic choices are limited. Such effects on the strategic choice of managers have an overall impact on the performance of the organization which was primarily influenced by the manager's attitude to risk. Brevis, Vrba and de Klerk (1997:172) had originally highlighted similar thinking that a decision taken under a risk condition can be undertaken when potential benefits or associated costs and probabilities of the risk occurrences are known. These decisions under circumstances of risk are common, as risk is between certainty and uncertainty and there is a likelihood of an outcome in the decision-making process.

Robbins and Coulter (2003:162) advise that a manager will be required to make decisions and will be faced with three conditions where the decision-making may occur: certainty, risk and uncertainty. But, the most common situation is the one with risk where the decision-maker will estimate the likelihood of outcomes. They also highlighted through research conducted, that high risk-taking lead to rapid decision-making and less utilization of time leading to maximizing organizational effectiveness. Ile *et al.* (2012:152) also state that if report findings does not enlighten decision-making with a view to enhancing organizational performance, then the value of the findings remain unrealized.

Jackson *et al.* (2009:37) also concur that managers undertake ethical decisions every day. While some decisions may be financial or economical in nature, other decisions may have an ethical dimension. Therefore, the impact of decision making may not only be an economical one, as the impact may be ethical. Ethical problems arise in organizations for a variety of reasons such as undue pressure to achieve productivity targets and profitability goals, and may lead to unethical behaviour such as falsifying documents. Based on this unethical behaviour, managers cannot make business decisions without first considering the ethical dimensions.

In the context of risk and ethics, Hendrikse and Hefer-Hendrikse (2012:158) comment that "ethics comprises the rules of the business game such as honesty, integrity and fairness." Unethical behaviour occurs where there is fraudulent behaviour, corruption and irregularities like bribery, lies, falsification of figures and selfishness with the aim of influencing business for other benefits. The practice of ethics is the orientation of "human life, individually or collectively, or institutional structures and practices", according to values of conduct. This

includes ethical behaviour in business decisions and actions leading to corporate integrity through the development of a code of ethics.

The King iii Report was developed through the necessity to update the King Code of Corporate Governance Principles for, among other reasons, “the increased demands by government and other institutions to take seriously their ethical, socially and environmental responsibilities to produce sustainability reports.” The King iii Report has been amended to the King iv Report <https://www2.deloitte.com/za/en/> and highlights three key aspects:

- *Strategic and ethical leadership* – that leaders must rise to the challenges of modern governance characterised by accountability, responsibility, transparency and fairness, with a view to accomplishing sustainable performance;
- *Sustainability* – this flags opportunity and risks for the enterprise and highlights the interconnectedness between society, nature and business which needs better understanding by decision-makers; and
- *Corporate citizenship* – the company comprises people who need to operate in a sustainable, responsible manner.

With reference to the research, the King Reports emphasises strongly ethical leadership, performance evaluation, strategic leadership, risk management and compliance risk governance, where the responsibility of risk is the governance structure, as espoused by Hendrikse and Hefer-Hendrikse (2012:183).

The Institute of Directors in Southern Africa (2009:73) makes mention of the King iii Report with specific reference to a board’s responsibility for risk governance, noting that the board’s responsibility is risk governance and should determine the levels of risk tolerance. A risk committee should be instituted to assist the governance structure in facilitating its risk responsibilities. The board should delegate to management the function to design, implement and monitor the risk management plan and ensure that risk assessments are continuous. The governance structure should ensure that methodologies and frameworks are in place to anticipate predictable risks with appropriate risk responses. Management needs to undertake continual risk monitoring to provide assurance to the governance structure for relevant, timely and accurate risk disclosure.

Proper management of ethics begins with complying with and disseminating clearly defined standards. These standards for the public service should be clear and should be reflected in the legal framework. Such principles must be put into practice by the public servant. The

political and administrative environments must be able to develop a conducive and ethical culture with a commitment to the ethical culture. Standards require dissemination through government and environments contributing to compliance. These mechanisms should reflect public service commitment to ethics in daily implementation of policies and procedures. Accountability mechanisms must be in place with appropriate procedures and sanctions created to deal with misconduct, as recommended by Visser and Erasmus (2002:302).

Swanepoel (2008:793) states that part of corporate governance is the conformance function to monitor whether the organisation is undertaking activities as promised, and that performance is satisfactory. Where management is lacking, corporate governance would push for change. Governance also has a role in ethical practice within the organisation, as corporate scandals can affect the reputation of the organisation. Therefore, ethics and accountability start at top management. Ethical behaviour must be found throughout the organisation as a key focus of all governance and managerial work for a sustainable future in South Africa. Ethical conduct and professionalism is something that public officials must strive for in order to establish confidence in the public they serve. Without professionalism and ethics displayed by public officials, a stable and strong workforce will not emerge in the South African public sector.

3.7 CONCLUSION

In conclusion, this discussion was used as the guiding principle to test the risk management strategy implementation in the College. This risk management strategy model formed the core aspects of the research as it tests the degree of alignment between the TVET College risk management practices with those of the highlighted progressive practices, leading to determining the effectiveness of risk management implementation at the College.

CHAPTER FOUR

RESEARCH METHODOLOGY AND DESIGN

4.1 INTRODUCTION

This chapter provides the research framework for determining whether the risk management strategy is implemented effectively in the TVET College. The chapter further provides a broad discussion on the research aims, research method and approach undertaken in the study. Insight regarding where the research is located with a description of the sample methods applied and sample population utilized is elucidated. Data collection strategies and the mechanism to analyze data will be described. Ethical considerations during the research process are also highlighted as part of the research methodology framework. May (2011:8) remarks that “research is more than a reflection on our opinions and prejudices: it substantiates, refutes, organizes or generates our thinking and produces evidence that may challenge not only our own beliefs, but those of groups and societies in general”.

4.2 AIM OF THE RESEARCH

The effectiveness risk management has not been tested in a further education and training College environment in KZN. The aim of the research was to ascertain if Elangeni TVET College was implementing a progressive risk management strategy in accordance with standard practices, as may be found in the corporate sector. During the research process, College risk management practices were identified and a comparison was made to the standardized, corporate best practices with a view to test the effectiveness of the College’s risk management function. The case study can therefore, be used as an instrument to contribute to ‘best’ practice in KZN TVET Colleges to improve business operations against the strategic goals of the TVET Colleges concerned. According to De Vos (2001:6), research “helps build knowledge for practice through ascertaining the effectiveness of practice methods.”

The framework of this research project was guided and determined by the following research questions:

- Did the College create the control environment for risk management?
- Does the College have risk identification strategies in place?
- How does the TVET College assess risks?
- Are risk control mechanisms implemented?

- What monitoring mechanisms are applied to measure risks?
- What is the extent of risk reporting in the College?

Data gathered relating to the above questions therefore, provided a course to determine the effectiveness of risk management implementation and whether the College sustained “efficient, effective and clear” systems for risk management.

4.3 RESEARCH METHOD

The research design that informed the research was the case study approach. According to Leedy and Ormrod (2005:108), the case study is a category of qualitative research where in-depth statistics are collected regarding an individual, program or institution. The purpose of a case study is to learn more about an unfamiliar or a poorly understood circumstance. In this instance, the case study was used as a tool to understand the effectiveness of the risk management strategy in the College.

May (2011:227) references Piekari *et al.* (2009:569), who describe the case study as “a strategy the examines, through the use of a variety of data sources, a phenomenon in its naturalistic context with a purpose of “confronting” theory with the empirical world.”

The case study enabled the researcher to learn more about the College’s risk implementation strategy and if it was achieving the intended expectations. Findings from the case study would enable other TVET Colleges in the Province, and possibly nationally, to effectively implement their operational risk strategies. The case study option was selected based on the involvement of fieldwork in the institution [College] to investigate the natural circumstances of the organization, as advanced by Welman, Kruger and Mitchell, (2008:193). Through the case study, the researcher was able to collect data through questionnaires, interviews, observations, documents and past records including the College’s strategic plan, risk management plan and monitoring and evaluation reports.

The effectiveness of the risk management strategy was based on data collected which showed the degree of implementation of the risk management plan, and how it actually impacted on the operational aspects and strategic intent of the College’s campuses. In a case study research design, Fox and Bayat (2007:70) refer to the case first being identified, and then the

boundaries being determined. These boundaries have been determined by the research objectives formulated and inform the study.

4.4 RESEARCH APPROACH

A problem to be solved requires suitable forms of research, namely, quantitative, qualitative or a mixture of both. The nature of the research problem is a characteristic that can influence the choice of the research approach or paradigm, as emphasized (Fox and Bayat, 2007:66). According to Robbins and DeCenzo (2005:39), the quantitative approach includes the applications of statistics and computer simulations. On the one hand, quantitative research is more useful where variables need to be counted, making use of statistics to process and explain data collected (Fox and Bayat, 2007:7). On the other hand, qualitative studies are applied in the description of communities, groups, and organizations, a view held by Welman *et al.* (2008:188). Qualitative research will scientifically describe people, events and aspects related with them, where it is not dependent on numerical data. It is sometimes problematic to make a strong distinction between the two approaches and therefore, research could be a combination of the two approaches, referred to as the mixed methods approach.

This study implemented the mixed methods research approach which combined qualitative and quantitative data. Creswell (2014:219) articulates that the researcher “collects both the qualitative and quantitative data and analyzes them separately. The researcher then compares the results of the findings to confirm or disconfirm each other.” This approach provides different types of information: in this case qualitative information was generated from the interviews while quantitative data emanated from questionnaires. Importantly, both data sets were expected to yield the same results. The qualitative part of the research was interpretive research as data was collected in the context of the environment and served as the basis for inductive generation of explanatory theory. In this study, the researcher endeavored to find out the nature of certain situations, processes and relationships and to determine the degree of effectiveness of the College risk management strategy. This entailed analyzing process effectiveness of risk management and to what degree of importance it contributes effectively to other management functions in the College environment. Is the risk management strategy a “living” document in College processes? One had to look at the relationships between different structures of management, and how each layer of management responded to the risk strategy. This was an explorative process of investigation which included a quantitative description of opinions, trends and attitudes of the College population sampled. The mixed

method design has the advantage in that the weaknesses of both quantitative and qualitative data collected can be neutralized, (Creswell, 2014:15).

4.5 RESEARCH APPROACH AND PHILOSOPHIES

A specific research design may involve “philosophical assumptions or worldviews.” Such worldviews influence the research process. The term “worldview” relates to a set of beliefs that guides research action, as expounded by Creswell (2014:5). Examples of worldviews are:

- The Positivist Worldview - This view represents the thinking after positivism and is often called the scientific method. It is associated more with quantitative research than qualitative research. This method challenges the notion of the absolute truth of knowledge. The researcher commences the research with an established theory, then accepts or refutes the theory;
- The Constructivist Worldview - It is a perspective or approach to qualitative research. Such theorists believe that “individuals seek understanding of the world in which they live and work.” The individuals develop subjective meanings of their experience which are varied and multiple. Such meanings develop or generate new theory;
- The Transformative Worldview - These individuals are critical theorists or participatory action researchers, and hold the view that research inquiry needs to be inter-woven with political change agendas to tackle social change orientation. Importance is placed on lives and experiences of groupings that have generally been marginalized, such as race, gender, sexual orientation, ethnicity and socio-economic class; and
- The Pragmatic Worldview - This view is associated with what arises out of situations, consequences and actions. This research approach is not confined to one system of philosophy. Research inquirers draw conclusions from both quantitative and qualitative assumptions. The researcher has the freedom of choice in methods, tools, techniques and research techniques to best suit his/her needs. The pragmatic approach is problem-centred, and occurs in social, political, historical and other contexts.

Drawing from the above, this research approach using the mixed method was underpinned by the Pragmatic Worldview Philosophy as the researcher conducted an investigation in a situation where conclusions were deduced from quantitative and qualitative data. .

4.6 STUDY SITE

The study was conducted at Elangeni TVET College in KwaZulu-Natal. It consists of 8 campuses which are spread within the eThekweni Metropolitan region as Pinetown, Mpumalanga, KwaMashu, Ntuzuma, KwaDabeka, Inanda, Ndwedwe and Qadi Campuses. The head office is situated in Pinetown which is about 20km north east of Durban. This was where the questionnaires and interviews were conducted. The campuses were visited to ascertain whether recommendations as set out in the Risk Assessment Management Report were implemented. The College has a student population of 6500 and 450 staff comprising management, academic, administrative and general assistant personnel, (Elangeni TVET College Strategic Plan: 2014-2019:8).

4.7 TARGET POPULATION

According to Welman *et al.* (2008:53), the target population is the complete collection of cases from which a sample is extracted. Fox and Bayat (2007:52), refer to populations as groups of events, individuals or objects which have a common characteristic which will represent the total sum of objects or individuals involved in the research study. The target population for this research study comprised the Institutional Management Team [IMT], staff and student class representatives of the College. The IMT consists of the director [rector], deputy directors, unit managers and campus managers. Unit and campus managers oversee College operations.

4.8 SAMPLING METHOD

Sampling can be either probability or non-probability in nature. In the case of probability sampling, each unit or element has an equal chance of being selected or included in the sample, while in non-probability sampling, elements or unit have no opportunity of being part of the sample, as pointed out by Welman *et al.* (2008:56). In this case study, probability sampling utilizing stratified sampling was used. The reason for this is that the sample comprised sub-populations or strata. The population is non-overlapping and homogeneous regarding the investigation conducted, as put forward by Fox and Bayat, (2007:55). In this research, the sample consisted of the different layers or structures of the College such as

senior management, operational managers, staff and student components, where stratified sampling was used. An advantage of stratified random sampling is that it consists of smaller samples, thereby requiring less time and costs to conduct the investigation. However, the sampling method that was implemented to draw a sample from the staff component was random non-probability sampling. This was indicative of every staff member having an equal opportunity of being selected.

4.9 SAMPLE AND SAMPLE SIZE

According to Foster (2010:387), a sample is a sub-set of the population. Sometimes researchers have to limit their research to part of the population which is referred to as a sample of the population, which is representative of the population, (Fox and Bayat, 2007:54). The sample in this research study comprised the management, staff and student representatives of the College. Management is the personnel required in the planning for risk management, and are the implementers of the risk strategy of the College. The staff and student component are at the coal-face where risk management is effected operationally. This sample ensured a high response rate as the samples were individuals who exercise a greater degree of responsibility in College functionality. A high response rate was achieved based on the ability to locate and identify the participants in the study. Hence, there was an expectation that there would be a greater degree of participation in the data collection process.

According to Fox and Bayat (2007:61), sample sizes depends on a number of considerations such as the population size, homogeneity of the population, as well as the degree of reliability required in the investigation, and the sampling method. Sample size is regulated by the following significant factors:

- Different analysis that will be carried out;
- Tolerable degree of error which impacts on accuracy for estimates;
- Degree of confidence in data collected; and
- Size of the total population from where the sample is being drawn.

For this research study, the expected sample size was 93, comprising 90 questionnaires and 3 interviews. The table below depicts the numbers of expected sample size and actual samples collected regarding the questionnaire survey.

There were 79 questionnaires that were collected from the various respondents, as reflected in the table below.

Table 4.1: Survey Sample

Categories	Population	Expected Sample Size	Actual Sample Collected
Operational Management	15	15	14
College Staff	450	50	45
Student Class Representatives	190	25	20
Total	655	90	79

The table is representative of the population sample that was part of a survey of 79 individuals who were issued with questionnaires, representing an overall response rate of 88%. Operational management had a return rate of 93% overall.

The table below depicts the interview schedule

Table 4.2: Interview Sample

Categories	Population	Expected Sample Size	Actual Sample Collected
Senior Management	4	3	3
TOTAL	4	3	3

The table above represents the population sample that was part of the interview process, representing a 100% return rate.

4.10 DATA COLLECTION

For the purpose of this research investigation, the mixed method was implemented to collect data, as it incorporates qualitative as well as quantitative data. This method has an advantage as both types of data when collected can be analyzed separately, after which a comparison of the results can be made to confirm or disconfirm each other, (Creswell: 2014:219). According to De Vos (2001:6), research affords “a framework for practice activities such as the systematic collection of data, use of inferences and discriminating evaluation of the outcomes of one’s effort.”

Qualitative data was collected through semi-structured interviews with the senior management personnel. During field work, the researcher compiled notes and tape recorded the interviews, as there could have been other observations made which may have added value during the data analysis process. Vithal and Jansen (2006:20) propose that a data collection plan be generated taking into consideration data collection methods, research parameters and research instruments to be used. The interview schedule is attached as Annexure B. Semi-structured interviews were conducted where a schedule of themes and questions were generated. This option was made available to allow the respondents to freely respond to questions posed with a view to obtaining other information not requested in the schedule of questions. When trends in responses from individuals occur, this could be vital information that would not have been discovered if a structured interview option was implemented. Respondents were free to participate as the study was voluntary and they were free to withdraw from the study if necessary; however, one had to be cognizant of time delays. Through the interview process, the respondents’ thoughts, feelings and experiences were brought to the fore. These can contribute to the intensity of what is being discussed. The interviewer elicits information from the interviewee, and must be aware and sensitive to the people being interviewed as people expressed their feelings.

Quantitative data was gathered through a survey. Each College site was visited where questionnaires were distributed by the researcher to the operational management, staff and student components. The researcher explained to each group the process of completing the questionnaire and provided clarifications where required. Welman *et al.* (2008:181) emphasize the importance of being sensitive and ethical during an intervention process such as data collection. Based on this statement, the literacy levels of the students were taken into consideration as this should not create any challenges when collecting survey data. The data

collection instrument was made simple to include closed questions where the respondent had a range of answers from which to choose. The researcher met with the respondents in an environment in which they felt comfortable and received a briefing on the research endeavor. This led to greater ease in completing the survey by the respondents. With more respondents being involved in the quantitative method as opposed to the qualitative option, the research produced greater data, leading to meaningful statistical testing, as highlighted by Creswell (2014:222). Annexure C, D and E represent questionnaires that were handed to the operations managers, staff and student representatives respectively.

The interview schedule and the survey questionnaires were constructed with the following core areas for research process, as reflected in Section B of the data collection instrument:

- Risk management environment;
- Risk identification;
- Risk assessment;
- Risk control;
- Risk monitoring; and
- Risk reporting.

Also, Section A for both data collection instruments contained the biographical information of the respondents. Both instruments contained the aims of the research, and ethics issues such as confidentiality of participation were highlighted in the consent letter. The respondents were further assured through the provision of information relating to the research project being ethically cleared by the University, as well as the research office contact details to direct any queries. The consent letter ensured that the data collection process was fair and non-obligatory regarding the participants.

Other forms of gathering data was used to source important and relevant College documentation, which included:

- Risk management strategy;
- College strategic plan;
- College policies and procedures;
- Monitoring and evaluation reports;
- Monthly management reports;
- Client satisfaction surveys; and

- Internal and external audit reports.

These documents focused on the themes being investigated. These documents [secondary data] are known sources of information of which the focus group and individual interviewees were aware. They were in a position to freely discuss aspects during the interview process, thereby adding to the quality of information requested.

4.11 DATA QUALITY CONTROL

Validity refers to the accuracy achieved in the findings of the study. It is the extent to which the research design and data collected allows the inquirer to draw accurate conclusions, as formulated by Leedy and Ormrod (2005:219). Qualitative reliability contributed to the relevance of the methodology that was pursued in the study. Data quality control can be achieved by analyzing the feedback from respondents in accordance with the key questions and objectives raised in the study, the findings and the use of methodological tools to gauge statistical significance. The use of formulating themes when examining evidence provides a convergence of several sources, adding to the degree of validity, (Creswell, 2014:201). The researcher took cognizance of factors such as experimental procedures, treatments or the experiences of the participants that can threaten validity and may result in incorrect inferences being drawn about a population. Validity in quantitative research refers to “whether the researcher can draw meaningful and useful inferences from scores on the instrument, such as content validity”, as highlighted by Creswell (2014:160).

4.12 DATA ANALYSIS

This research attempt made use of thematic analysis used during the data analysis process. Data analysis involves making sense of the data collected in order to gain information. During the data collection process such as interviews and focus group discussions, field notes were made by hand and recordings were made. The notes and recordings needed to be processed in order to generate conclusions from the information, for example through theme identification. This can be described as “umbrella” constructs where one looks for word repetitions and keywords, according to Welman *et al.* (2008:212). Data analysis for research involved the organizing of details in a specific way, such as in chronological order. Data was clustered into specific groups. The data was then interpreted for statistical significance. Patterns were identified for specific themes and the overall analysis was constructed to draw conclusions. The research looked into convergence of data which could have arisen during the data collection process, (Leedy and Ormrod 2005:136).

The data collected from the responses was analyzed with Statistical Package for the Social Sciences (SPSS) version 24.0, which is a software program. Data was entered into a computer-based file where data file formats have a range of software-analysis packages. The data file contained data which were collected from each question stored in columns; individual collection of responses was stored in rows. The data is then entered as numeric codes with matching labels for each variable description and group labels are attached. The survey data was designated using tables and graphs. Data was also categorized as individual sets or a description of variable relationships. Statistical techniques estimated population parameters, group differences and statistical significance, as outlined by May (2011:122). Reliability and validity of the data was done using Cronbach's Alpha and Bartlett's Test of Specificity. Factor analysis was implemented to make reliable sense through data reduction. The statistical analysis terminologies are expanded on below:

- Statistical Package for the Social Sciences (SPSS) version 24.0 is a software program used for statistical analysis in the social science field. Arkkelin (2014:2) points out that SPSS is applied to undertake “statistical data analysis” and allows various forms of data transformations, analysis and output.
- Cronbach's alpha is a quantity widely applied to measure validity and reliability of assessments to increase the accuracy of evaluations and is represented by α . Coefficient values between 0.70 and 0.95 are regarded as acceptable, as purported by Tavakol and Dennick (2011:53).
- Factor analysis is a statistical technique regarding observable and measurable variables whose main goal is to reduce data to identify common variances among variables. Yong and Pearce (2013:80) refer to these variables as “hypothetical constructs”.
- Kaiser-Meyer-Olkin [KMO] and Bartlett's Test of Sphericity are tests undertaken to measure whether the correlations of data are organized in a manner that facilitates factor analysis. Kaiser-Meyer-Olkin Measure of Sampling Adequacy values ranges from 0 to 1 with values closer to 1 signifying superior appropriateness, as recommended by Heilig (2013:102).

The principle component analysis was used as the extraction method, and the rotation method was Varimax with Kaiser Normalization for effective interpretation of data. Yong and Pearce (2013:84) point out that the orthogonal technique utilizing Varimax rotation “minimizes the number of variables having high loadings on each factor and works to make small loadings smaller”.

Hypothesis testing was conducted which comprised conducting statistical tests usually beginning with a claim or theory about a population or parameter. Where the population parameter is equal to the claimed value, this is referred to as Null Hypothesis. If this is untrue, then something else must be true and is referred to an Alternate Hypothesis, as outlined by Levine, Ramsey and Smidt (2001:393).

Fisher’s Test Exact was implemented. The Chi-squared test is applied when sample sizes are large where an exact testing method is required. In this study the heterogeneous population was separated into strata resulting in “stratified analysis” and an enhanced testing influence as recommended by Jung (2014:129). A Kruskal-Wallis test was undertaken which “tests whether the mean ranks are the same in all groups”. McDonald (2015:61) states that this test utilizes a “nominal variable and one ranked variable” and the null hypothesis reflects that “the mean ranks of all the groups are the same”.

In order to analyze whether there was a relationship between two or more variables, bivariate correlation was effected. Bivariate correlation “examines the correlation or relation between two variables. It provides information about the strength of a relationship [from uncorrelated, when the correlation is zero, to perfectly correlated, when the correlation is positive or negative one] and the direction of the relationship [positive or negative]” as suggested by Lomax and Li (2013:29). Lastly, there was the determination of the p-values which is central to communication of statistical outcomes. It is stated that the p-value is a “measure of discrepancy of the fit of a model or null hypothesis and is a continuous measure of evidence”, Gelman (2013:70).

4.13 ETHICAL CONSIDERATIONS

De Vos (2001:24) refers to ethics as a collection of “moral principles suggested by an individual or group which is accepted, providing rules and behavioural expectations about correct conduct” and in this case towards the respondents. Also, Fox and Bayat (2007:148) refer to ethical considerations as a process dealing with seeking permission or informed consent from individuals participating in the research through a process of questioning, interviews or observations. According to Welman and Kruger (1999:181), ethical considerations become very important during the following stages of research:

- During the recruitment of participants;
- During a measurement process to which they may be subjected; and
- During the issue of acquired results.

With regard to this research investigation, permission was sought from the director of the College to undertake research into the effectiveness of the risk management strategy in the College. The director was informed as to the nature of the investigation to ensure that confidential and sensitive information would not be considered. The College management which constitutes the sample for the research was informed on what was required from them in the investigation; therefore their permission to be part of the research was sought through the gatekeeper’s letter. They were informed that for any reason should they feel uncomfortable during the research, and if they wanted to withdraw from the process of consultation, that it was their prerogative to do so without any prejudice. This voluntary aspect was in keeping with the University’s policy for postgraduate research.

The participants will remain anonymous. Their confidentiality and privacy was assured through the use of an agreement document between themselves and the researcher. Importantly, permission was sought from the University of KwaZulu-Natal Ethics Committee, together with a gatekeeper’s letter from the TVET College.

4.14 CONCLUSION

This chapter expounded on the research framework implemented as a broad discussion on the research aims, method and approach. There was a description of the sample methods applied and the sample population utilized. The data collection process and data analysis method was described with an understanding of the ethical considerations during the research process. Through the application of the case study, the researcher was able to understand “first-hand” the actual implementation of risk management in a TVET College. The use of the mixed methods approach aided the researcher in collecting data through various means which enriched the research process. The chapter that follows represents a comprehensive analysis of the data collected through the mixed methods research approach.

CHAPTER FIVE

RESEARCH FINDINGS, ANALYSIS AND DISCUSSION

5.1 INTRODUCTION

This chapter presents the results and discusses the findings obtained from the questionnaires and interviews in this study. May (2011:121) advises that after collecting data from questionnaires, it is important to analyse them by generally utilizing statistical analysis software packages. The data collected from the responses was analysed with SPSS version 24.0. The results present the descriptive statistics in the form of graphs, cross tabulations and other figures for the quantitative data that was collected. Inferential techniques include the use of correlations and Chi-Square test values, which are interpreted using the p-values. The questionnaire was the primary tool that was used to collect data and was distributed to student class representatives, staff and operational managers at the TVET College. Data was also gathered through interviews that were conducted with the College senior management.

5.2 QUANTITATIVE SAMPLE ANALYSIS

In total, 90 questionnaires were dispatched. However, 79 were returned, which produced an 88% response rate. The table below illustrates the distribution of the questionnaire sample:

Table 5.1: Questionnaire Distribution

Categories	Sample Size	Actual Surveys Conducted
Operational Management	15	14
College Staff	50	45
Student Class Representatives	25	20
Total	90	79

The illustration below depicts the percentage distribution of the questionnaire survey sample, where it is observed that the highest percentage is represented by the staff category of 57%. This is significant for the research: the staff are at the coal-face of operations where they implement management decisions.

Table 5.2: Survey Percentage Distribution

	Frequency	Percent
Staff	45	57
Students	20	25
Management	14	18
Total	79	100

There were 3 interviews that were conducted with the College senior management.

5.3 THE RESEARCH INSTRUMENT

The questionnaire research instrument consisted of 40 items, with a level of measurement at a nominal or an ordinal level. The questionnaire was divided into 6 sections which measured various risk themes deemed pertinent for the study, and the discourse on risk management, is illustrated.

- A - Biographical data
- B - Understanding the Setting and Control Environment
- C - Risk Identification
- D - Risk Assessment
- E - Risk Control
- F - Risk Monitoring
- G - Risk Reporting

5.3.1 Reliability of Statistics

The two most important aspects of precision are reliability and validity in research. Reliability is computed by taking several measurements on the same subjects. Cronbach's Alpha is a quantity used to evaluate the "reliability or internal consistency" of test items where a reliability coefficient of 0.70 or higher is considered as "acceptable",

The table below reflects the Cronbach’s Alpha score for all the items that constituted the questionnaire.

Table 5.3: Cronbach’s Alpha Score

	Section	Number of Items	Cronbach's Alpha
B	Understanding the Setting and Control Environment	12 of 12	0,873
C	Risk Identification	5 of 5	0,882
D	Risk Assessment	6 of 6	0,826
E	Risk Control	6 of 6	0,856
F	Risk Monitoring	6 of 6	0,895
G	Risk Reporting	5 of 5	0,908

The reliability scores for all sections as above exceeded the recommended Cronbach’s Alpha value of 0.70. This indicates a high degree of acceptable, consistent scoring for these sections of the research. Therefore, these scores are suggestive of reliable data that was amassed for the quantitative part of the research adding accuracy significance to the inferences and conclusions drawn about the implementation of the risk management strategy in the College.

5.3.2 Factor Analysis

Factor analysis is a statistical technique whose main goal is data reduction to identify associations among variables. The objective of this analysis is to detect factors which underlie the variables.

The matrix tables are preceded by a summarised table that reflects the results of Kaiser-Meyer-Olkin [KMO] and Bartlett's Test of Sphericity which are statistical assessments for the overall significance of all correlations or associations in a correlation matrix. The requirement is that Kaiser-Meyer-Olkin Measure of Sampling Adequacy should be greater than 0.50 and Bartlett's Test of Sphericity less than 0.05,

In all instances, the conditions were satisfied which allowed for the factor analysis procedure. Factor analysis is done only for the Likert scale items. Certain components are divided into finer components. This is referred to below in the rotated component matrix.

5.3.3 KMO and Bartlett's Test

Table 5.4: KMO and Bartlett's Test

Question	Section	Kaiser-Meyer-Olkin Measure of Sampling Adequacy	Bartlett's Test of Sphericity		
			Approx. Chi-Square	df	Sig.
B	Understanding the Setting and Control Environment	0,793	380,539	66	0.000
C	Risk Identification	0,862	206,564	10	0.000
D	Risk Assessment	0,742	185,583	15	0.000
E	Risk Control	0,819	216,682	15	0.000
F	Risk Monitoring	0,865	267,634	15	0.000
G	Risk Reporting	0,810	290,982	10	0.000

All of the conditions are satisfied for factor analysis as the Kaiser-Meyer-Olkin Measure of Sampling Adequacy value is greater than 0.50, and the Bartlett's Test of Sphericity significance value is less than 0.05. This was significant as an analysis of the risk variables for operational risk produced reliable and valid data, enabling accurate inferences concerning risk management implementation in the College.

5.3.4 Rotated Component Matrix

Principle component analysis was used as the extraction method, and the rotation method was Varimax with Kaiser Normalization. This is an orthogonal rotation method that minimizes the number of variables that have high loadings on each factor. It simplifies the interpretation of the factors. Factor analysis shows inter-correlations between variables. Items of questions that loaded similarly imply measurement along a similar factor. An examination of the content of items loading at or above 0.5 was effectively measured for the various risk variables.

By referring to Annexure F, the objective statements that constituted C, D, E, F and G loaded perfectly along a single component. This implied that the statements that constituted these sections perfectly measured what it set out to measure, as in these cases scores achieved were above 0.5. It was noted that the variables that constituted Section B loaded along 2 components (sub-themes). This meant that respondents identified different trends within this section. Within the section, the splits were colour-coded. The sub-themes generated are probable based on Section B being diverse in nature. The statements highlighted in blue are associated to the organizational structure linked to policies and procedures, while the statements linked to yellow are associated to stakeholder roles, risk culture and operations. It is observed that 5 of the 6 sub-themes loaded along a single component signifying precision and unambiguity regarding the survey statements. This ensured that the feedback from the respondents was clear, providing accurate responses about the risk function in the College and affording the researcher the capacity to deduce exact and consistent conclusions regarding the research findings.

5.4 BIOGRAPHICAL DATA ANALYSIS

This segment referred to as Section A summarises the biographical characteristics of the survey respondents. The table below indicates the staff and management occupation proportions in the College.

Table 5.5: Staff Occupation Percentages

Occupational position		Count	Group		Total
			Staff	Management	
	Academic Staff	36	36	0	36
		% within Group	80,0%	0,0%	61,0%
	Support Staff	9	9	0	9
		% within Group	20,0%	0,0%	15,3%
	Unit Manager	0	0	6	6
		% within Group	0,0%	42,9%	10,2%
	Campus Manager	0	0	8	8
		% within Group	0,0%	57,1%	13,6%
Total		45	45	14	59
		% within Group	100,0%	100,0%	100,0%

Approximately two-thirds of the College staff constituted academic staff [61%], while the remaining staff constituted support staff [39%], including management personnel. Amongst the managers, 42.9% were Unit Managers and 57.1% were Campus Managers. The high percentage [61%] representative of academic staff was beneficial to the research as this component of staff is at the “coal-face” of College operations. They observe such operational activities regularly and recognized the risk exposure of the College. For both categories, the differences observed were significant ($p < 0.001$).

The student sample consisted of respondents from the following faculties.

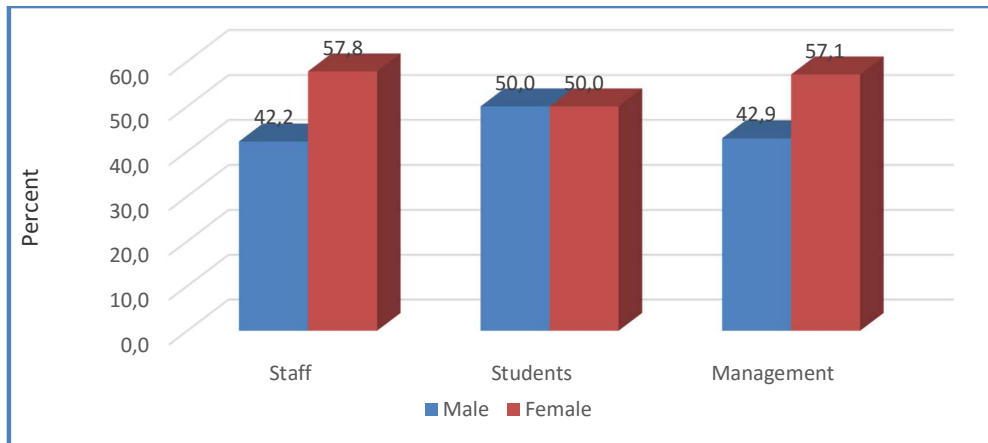
Table 5.6: Student Faculty Distribution

		Group	
		Students	Total
Academic study	Engineering	Count	7
		% within Group	35,0%
	Business	Count	7
		% within Group	35,0%
	Skills	Count	6
		% within Group	30,0%
Total	Count	20	
	% within Group	100,0%	

The table above shows even distribution across the 3 categories of academic study where the numbers of respondents from the different faculties were not significantly different ($p = 0.308$). This reflected a balanced response from the 3 academic faculties.

The figure below compared the gender distribution within the groups.

Figure 5.1: Gender distribution



College staff and management groupings had more female respondents. This could be attributed to the College’s recruitment policies which consider gender equity targets. However, for the student grouping, there was equal gender distribution which could be based on Colleges nationally promoting females in engineering disciplines to support gender equity in the labour market. The difference in the numbers between gender was not significant (Fisher’s Exact $p = 0.929$).

The table below indicates the number of years that staff are employed at the College.

Table 5.7: Years Employed at College

		Group		Total	
		Staff	Management		
No. of years in the TVET College sector	1 – 5	Count	17	1	18
		% within Group	37,8%	7,1%	30,5%
	6 -10	Count	14	4	18
		% within Group	31,1%	28,6%	30,5%
	11 – 15	Count	3	3	6
		% within Group	6,7%	21,4%	10,2%
	16 – 20	Count	2	3	5
		% within Group	4,4%	21,4%	8,5%
	> 20	Count	9	3	12
		% within Group	20,0%	21,4%	20,3%
Total	Count	45	14	59	
	% within Group	100,0%	100,0%	100,0%	

Management staff [92%] was in employ for more than 5 years compared to 62.2% of the staff component. There was a high percentage [37.8%] of staff in the employ of the College for less than 5 years. It was observed that 61% of College personnel [staff and management] were employed for less than 11 years (Fisher’s Exact $p = 0.006$). Overall, this indicates that respondents had been in employ for a while, also a useful fact as it indicates responses from experienced workers.

The distribution of the students by age group is shown below.

Table 5.8: Student Age Groups

			Group	
			Students	Total
Age Group	16 – 18	Count	3	3
		% within Group	15,0%	15,0%
	19 – 21	Count	9	9
		% within Group	45,0%	45,0%
> 21	Count	8	8	
	% within Group	40,0%	40,0%	
Total	Count		20	20
	% within Group		100,0%	100,0%

The bulk of the students [85%] were 19 years and above. This was reflective of the age maturity of this group of respondents. Only a small percentage, 11.1%, was below 19 years of age. The difference in the spread of respondents is significant (Chi-Square p -value = 0.042).

The table below reflects the combined tables of the qualifications for the different groups.

Table 5.9: Combined Qualifications Distribution

			Group					
	Certificate	Count	Staff	Students	Management	Total		
			% within Group	2	4,4%	0	0,0%	0,0%
Highest Qualification	Diploma	Count	12	0	1	13		
		% within Group	26,7%	0,0%	7,1%	16,5%		
	Higher Diploma	Count	5	0	0	5		
		% within Group	11,1%	0,0%	0,0%	6,3%		
	Degree	Count	8	0	3	11		
		% within Group	17,8%	0,0%	21,4%	13,9%		
	Post Graduate	Count	18	0	10	28		
		% within Group	40,0%	0,0%	71,4%	35,4%		
	Grade 12	Count	0	10	0	10		
		% within Group	0,0%	50,0%	0,0%	12,7%		
Grade 11	Count	0	7	0	7			
	% within Group	0,0%	35,0%	0,0%	8,9%			
Other	Count	0	3	0	3			
	% within Group	0,0%	15,0%	0,0%	3,8%			
Total	Count	45	20	14	79			
	% within Group	100,0%	100,0%	100,0%	100,0%			

It is noted that 57 of the 79 respondents have a tertiary qualification. It is seen that 71.4% of the management have a post graduate qualification, while 40% of staff have the same qualification. The number of staff with diplomas comprises 26.7% while 58.3% of the student representation has a grade 12 qualification. Importantly, 84.6% of the respondents have a grade 12 and higher qualification which is representative of high literacy levels amongst the respondents.

5.5 RISK STRATEGY IMPLEMENTATION ANALYSIS

This section analyses the scoring patterns of the respondents per variable per section regarding the risk strategy implementation. Results are presented using the mean scores for each statement for each group. Results are then further analysed according to the importance

of the statements. To determine whether the scoring patterns per statement were significantly different per statement between the groups, a Kruskal Wallis test was done.

Hypothesis testing comprises conducting statistical tests usually begins with a claim or theory about a population or parameter. The null hypothesis claims that the patterns across the groups are similar. The alternate states that there is a significant difference between the scoring patterns. The highlighted significant values (p-values) are less than 0.05 (the level of significance), implying that the distributions were not similar. This therefore relates to the differences between the way respondents scored by the group as significant.

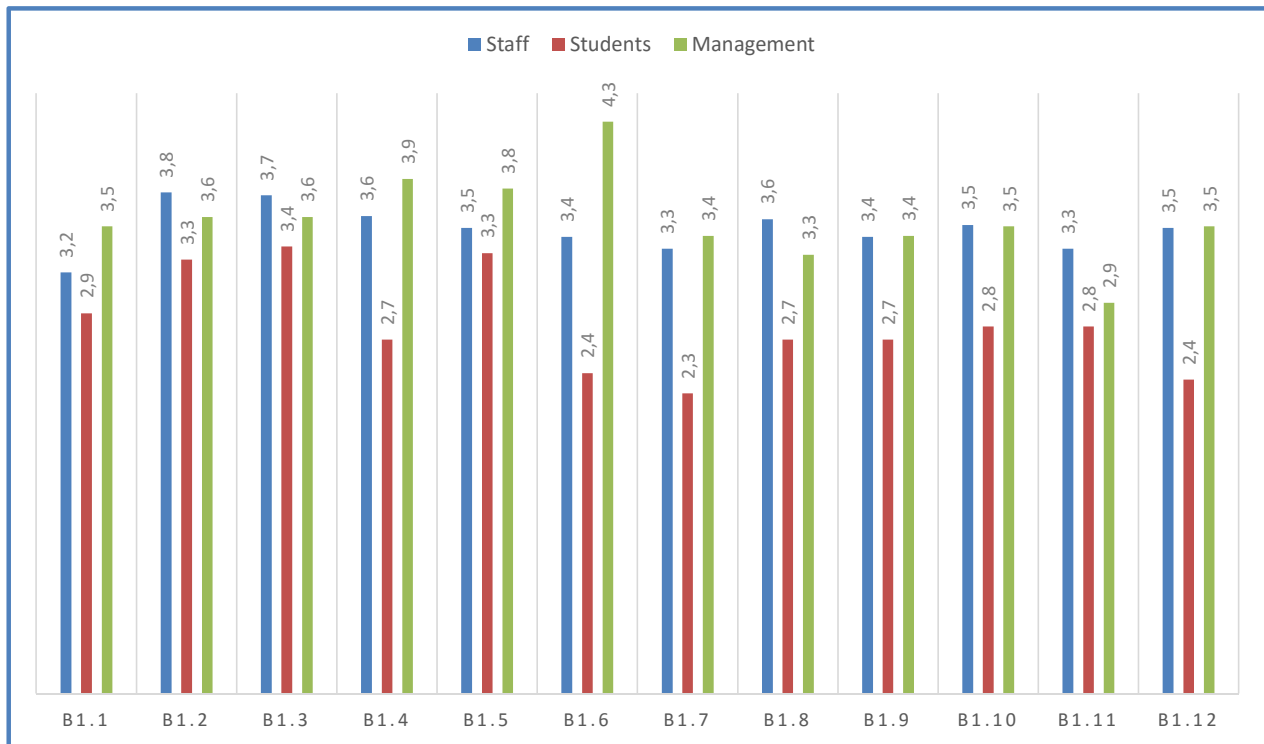
5.5.1 Analysis of “Understanding the Setting and Control Environment of Risk”

This section deals with the sub-themes relating to “Understanding the Setting and Control Environment of risk” referred to as Section B. The table below summarises the scoring mean patterns and the significance of the differences as tested.

Table 5.10: Kruskal Wallis Analysis of Understanding the Setting and Control Environment of Risk

		Staff	Students	Management	Kruskal Wallis p-value
An operational environment scan was done before the identification of risks	B1.1	3,2	2,9	3,5	0,094
College has a risk management policy	B1.2	3,8	3,3	3,6	0,074
College has risk management procedures	B1.3	3,7	3,4	3,6	0,213
Presence of an organizational structure for risk management	B1.4	3,6	2,7	3,9	0,001
College has clear roles and responsibilities for risk management	B1.5	3,5	3,3	3,8	0,121
As a relevant stakeholder, I was made aware of risk management in the College	B1.6	3,4	2,4	4,3	0,000
College has established a risk culture	B1.7	3,3	2,3	3,4	0,000
Risk management has enabled effective College operations	B1.8	3,6	2,7	3,3	0,001
Continuous operational improvement has resulted through the risk strategy	B1.9	3,4	2,7	3,4	0,005
College environment is generally stable	B1.10	3,5	2,8	3,5	0,034
Risk management has enabled an improvement in pass rates	B1.11	3,3	2,8	2,9	0,033
Risk management has resulted in successful audit processes	B1.12	3,5	2,4	3,5	0,000

Figure 5.2: Mean Scores of Understanding the Setting and Control Environment of Risk



It is noted that the student scores are lower than those for staff for all statements.

The following patterns are observed:

- 5 of the 12 statements show higher means for Management than for Staff
- 4 statements have higher means for staff than Management
- Staff and management had same scores for 3 statements
- The response of the Management is significantly high for 1 variable [B1.6]
- For variable B1.12, B1.3 and B1.8, Staff means are higher than the Student and Management mean values
- There is close correlation between the Staff and Management means at B1.3, B1.7, B1.9, B1.10 and B1.12.

More than half [8/12] of the statements had responses that were dis-similar from the respondents. This represented a variation regarding the perceptions of the statements from the respondents. Nearly half the statements as above have high means for Management because

of stakeholder representation being involved in the development of risk processes in the College. This re-inforces support for environmental scan, risk organizational structure, clear roles and responsibilities and stakeholder involvement by the Management. B1.6 is significantly high for management as all management were involved in developing the College risk register, resulting in the validity of this score. Student scores are low for all variables as a result of them not being aware of risk management in the College, reflected by a mean of B1.6. Staff and Management concur with statements B1.9, B1.10 and B1.12, reflected by equal means. Both these respondents believe that the College risk management processes have resulted in continuous operational improvement, successful audits and a generally stable College environment. In order to improve risk management functions, the senior management needs to improve risk communication to all College stakeholders. Haubenstock (2003:257) is supportive of this view where the author states that staff need to understand the communications procedures regarding risk reporting and decision-making for the establishment of a risk management culture.

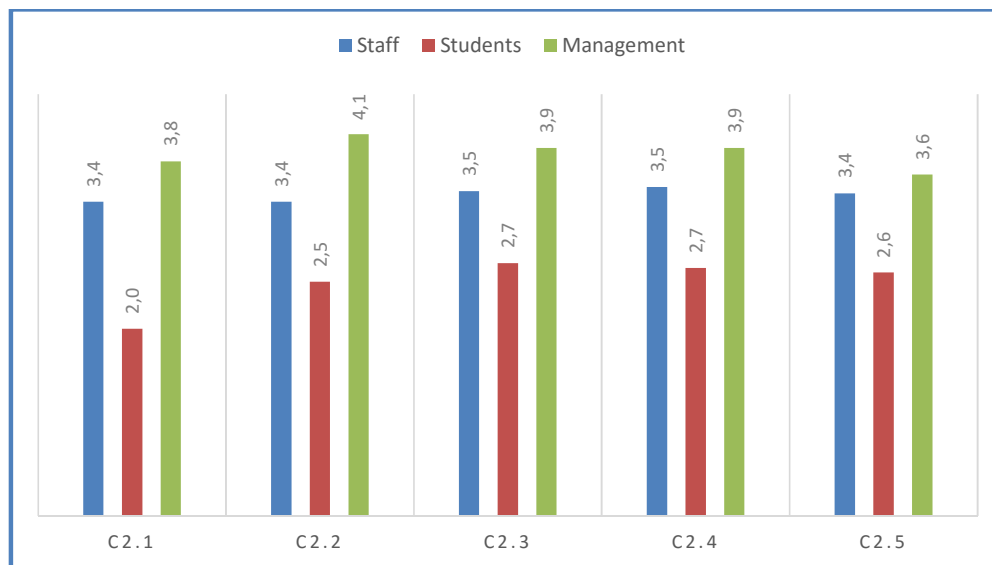
5.5.2 Analysis of Risk Identification

This analysis deals with the sub-themes relating to “Risk Identification” referred to as Section C. The table below summarises the scoring patterns and the significance of the differences as tested.

Table 5.11: Kruskal Wallis Analysis of Risk Identification

		Staff	Students	Management	Kruskal Wallis p-value
Stakeholder representatives were part of risk identification development	C2.1	3,4	2,0	3,8	0,000
Risk identification method, e.g. a workshop, was used to identify risks	C2.2	3,4	2,5	4,1	0,000
Aims and objectives for risk identification was determined	C2.3	3,5	2,7	3,9	0,000
Strategic and operational environments were considered in the risk identification process	C2.4	3,5	2,7	3,9	0,000
Presence of a structured approach of the risk identification process	C2.5	3,4	2,6	3,6	0,000

Figure 5.3: Mean Scores of Risk Identification



The following observations can be made:

- For all sub-themes, Student means were the lowest.
- The means for Management are the highest for all variables
- The Staff means are all consistent at 3.4 and 3.5
- The mean for 2 variables [C2.3 and C2.4] for Management are the same at 3.9
- The Kruskal Wallis p-values show that there are significant differences between all sub-themes

The means for Management are highest for all the above variables because only management is involved in the risk identification process. It is noted that Students means are low for all means as Students were not involved in identifying risks. C2.3 and C2.4 are same for Management, which validate their opinion about risk aims, considering the strategic environments for risk identification given their participation in the process of risk identification. By verifying a risk workshop attendance with a senior manager, Staff representation were not part of the risk workshop and risk identification process, which is contrary to what Young (2008:49) recommends (risk management necessitates the involvement of staff at the lowest levels of the organization as they can identify and categorize risk exposure within their areas of responsibilities). The College should ensure that its stakeholders are involved in risk identification processes which would enable effective

risk management. This is reflected in varied means amongst the respondents regarding all statements for the risk theme.

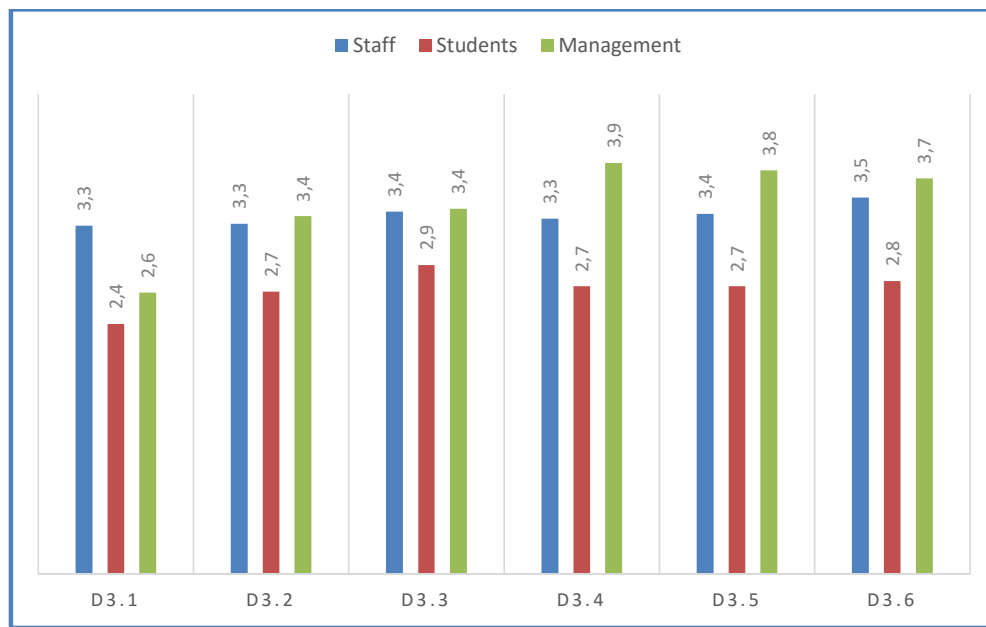
5.5.3 Analysis of Risk Assessment

This section relates with the sub-themes involving “Risk Assessment” referred to as Section D. The table below summarises the scoring patterns and the significance of the differences as tested.

Table 5.12: Kruskal Wallis Analysis of Risk Assessment

		Staff	Students	Management	Kruskal Wallis p-value
Received capacity building in order to assess risks effectively	D3.1	3,3	2,4	2,6	0,001
Significance of the risk in relation to the financial loss was considered	D3.2	3,3	2,7	3,4	0,010
Risks were profiled according to frequency and its impact	D3.3	3,4	2,9	3,4	0,025
Identified risks were quantified and rated	D3.4	3,3	2,7	3,9	0,000
Risk assessment framework was identified and implemented	D3.5	3,4	2,7	3,8	0,000
College has assessed its risks	D3.6	3,5	2,8	3,7	0,002

Figure 5.4: Mean Scores of Risk Assessment



The following observations can be made:

- For all sub-themes, Student means were also the lowest
- The means for Management are the highest for 4 variables
- The means for 1 variable [D3.3] are the same for Staff and Management
- The mean for 1 variable [D3.1] regarding Staff is higher than Management
- The Kruskal Wallis p-values show that there are significant differences between all sub-themes

There are varied means amongst the respondents regarding all statements for this risk theme, suggesting significant relationships between the respondents. It is observed that the mean for Management was the lowest concerning receiving capacity building to assess risk, which is conflicting since all Management participated in a basic risk management workshop. Four of the six variables have means highest for Management re-enforcing the skills that were learnt during the risk workshop. Both Staff and Management agree that risks were profiled according to frequency and impact. This is significant for the College, where staff are aware of the risk exposure. This profiling of risk according to frequency and impact is in agreement with the recommendations of the authors, Blunden and Thirwell (2010:77).

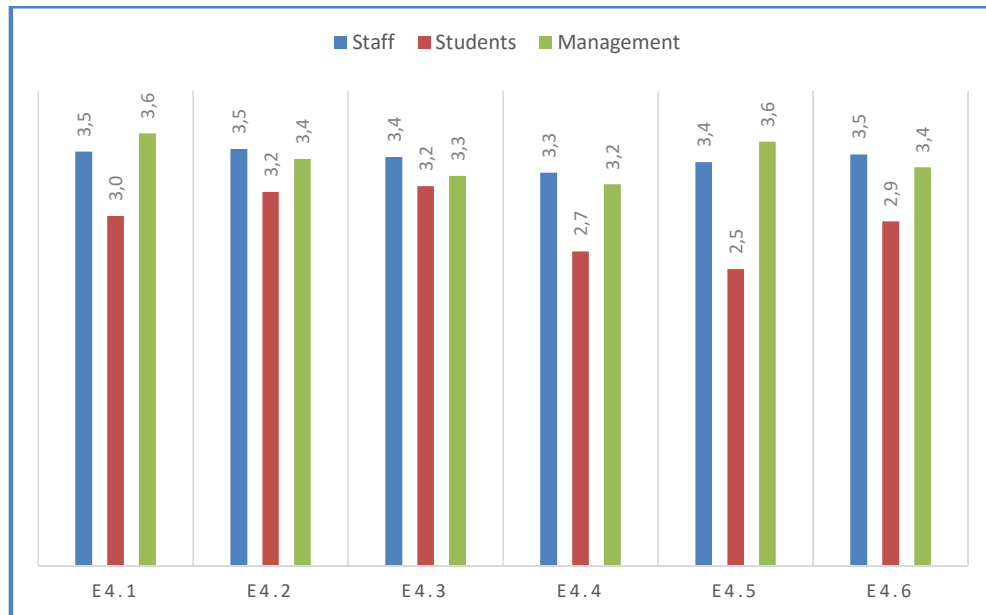
5.5.4 Analysis of Risk Control

This sectional analysis deals with the sub-themes relating to “Risk Control” referred to as Section E. The table below summarises the scoring patterns and the significance of the differences as tested.

Table 5.13: Kruskal Wallis Analysis of Risk Control

		Staff	Students	Management	Kruskal Wallis p-value
Awareness of controlling operational risk	E4.1	3,5	3,0	3,6	0,011
Risk control measures are in place to manage risks	E4.2	3,5	3,2	3,4	0,400
Action plans exist to mitigate or eliminate risks	E4.3	3,4	3,2	3,3	0,546
Risk financing has been considered as part the budget process	E4.4	3,3	2,7	3,2	0,017
Risk controls are monitored and reviewed for effectiveness	E4.5	3,4	2,5	3,6	0,000
Presence of oversight structures to control risks	E4.6	3,5	2,9	3,4	0,031

Figure 5.5: Mean Scores of Risk control



The following observations can be made:

- The means for Management are highest for only 2 of the 6 variables
- The means for 4 of the 6 variables for Staff were highest
- The mean for Staff was the same for 3 variables at 3.4 and the other means were at 3.5, signifying consistency in responses
- For all sub-themes, Student means were the lowest
- The Kruskal Wallis p-values show that there are significant differences for 4 of the 6 sub-themes

The mean for Management is highest concerning awareness of controlling risk which is based on management attending a risk workshop. It is noted that students means are all low, reinforcing the issue that this stakeholder has not been made aware of risk processes in the College. The mean scores for Staff show consistent values relating to their being aware of risk control activities in the College. It is also unusual that in some cases Staff means were higher than Management's mean values. This could be based on Staff being aware of the College's policies and procedures which is a risk control mechanism. This sub-theme reflects varied means amongst the respondents regarding all statements for the risk theme. The College's development of operational policies and procedures is supported by Young (2008:96), who suggests that internal controls allow an observance to management's policies and procedures for the accomplishment of efficient and effective work processes.

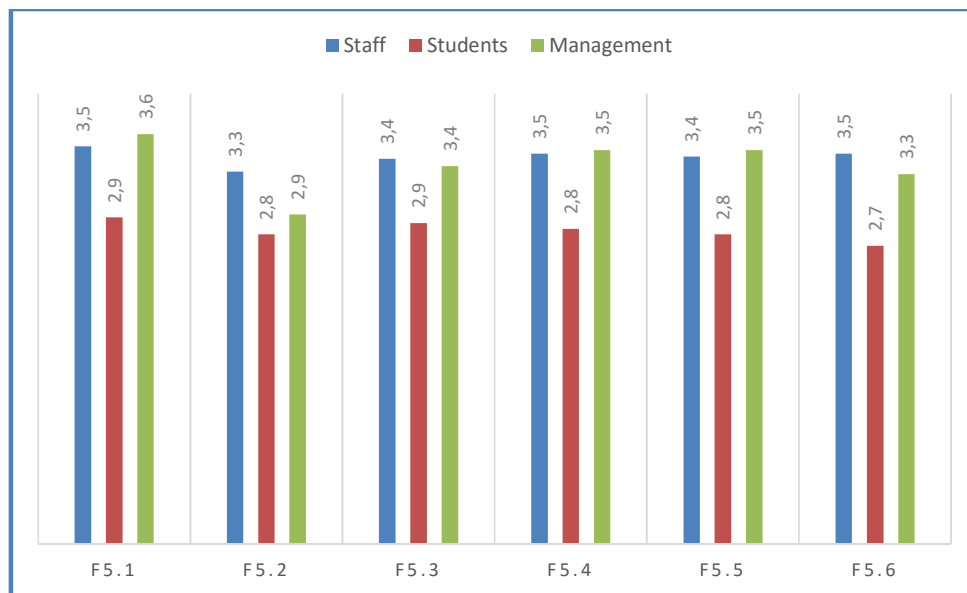
5.5.5 Analysis of Risk Monitoring

This unit analysis deals with the sub-themes relating to “Risk Monitoring” referred to as Section F. The table below summarises the scoring patterns and the significance of the differences as tested.

Table 5.14: Kruskal Wallis Analysis of Risk Monitoring

		Staff	Students	Management	Kruskal Wallis p-value
College structures are in place to monitor risks	F5.1	3,5	2,9	3,6	0,003
Received capacity building on risk monitoring	F5.2	3,3	2,8	2,9	0,016
Awareness of measurement of operational risks	F5.3	3,4	2,9	3,4	0,029
Awareness of risk monitoring	F5.4	3,5	2,8	3,5	0,008
Ability to identify new risks through risk monitoring	F5.5	3,4	2,8	3,5	0,008
Risk monitoring has enabled proactive College management	F5.6	3,5	2,7	3,3	0,001

Figure 5.6: Mean Scores of Risk Monitoring



The following observations are deduced:

- The means for Management are highest for only 2 of the 6 variables
- The means for 2 of the 6 variables for Staff were highest
- The mean for Staff and Management was almost the same for 4 variables
- For all sub-themes, Student means were the lowest and were the same for 3 variables at 2.8.
- The Kruskal Wallis p-values show that there are significant differences for all of the 6 sub-themes

Management means were high relating to some College structures being in place to monitor risk and new risks being identified during risk monitoring. These responses could be based on the nature of work that management is involved in where such conclusions can be made. There is consistency in the means of Staff and Management, based on these respondents being aware of internal operational audits being undertaken by the Quality Management unit. Management’s mean is highest for F5.5, where they agree that risk monitoring enables new risks to be identified. This perception is supported by the view of Valsamakis *et al.* (2013:143), who refers to risk monitoring as an “early warning system” that makes organizations aware of new risks, thereby prompting proactive control measures. Student scores are the lowest due to their being unaware of risk processes in the College.

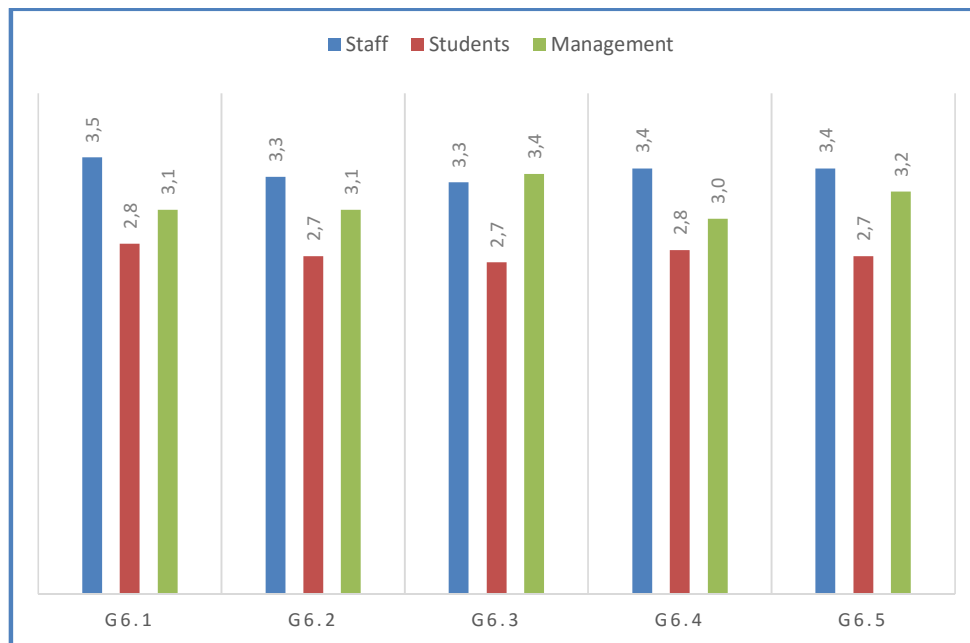
5.5.6 Analysis of Risk Reporting

This segment deals with the sub-themes relating to “Risk Reporting” referred to as Section G. The table below summarises the scoring patterns and the significance of the differences as tested.

Table 5.15: Kruskal Wallis Analysis of Risk Reporting

		Staff	Students	Management	Kruskal Wallis p-value
Presence of risk reporting mechanisms to track risk management progress	G6.1	3,5	2,8	3,1	0,001
Evidence of regular risk reporting from management	G6.2	3,3	2,7	3,1	0,045
Discussions in meetings of risks from the risk report	G6.3	3,3	2,7	3,4	0,009
Evidence of a format for risk reporting	G6.4	3,4	2,8	3,0	0,004
Awareness of risk management progress	G6.5	3,4	2,7	3,2	0,000

Figure 5.7: Mean Scores of Risk Reporting



The following observations are inferred:

- The mean for Management was highest for only 1 of the 6 variables [G6.3]
- The means for 4 of the 6 variables were highest for Staff
- For all sub-themes, Student means were the lowest and were almost the same for all variables at 2.7 and 2.8
- Two sets of means for Staff were constant at 3.3 and 3.4
- The Kruskal Wallis p-values show that there are significant differences for all of the 5 sub-themes

The mean score for Management concerning G6.3 is the highest since it is the responsibility of management to have meetings and discussions where operational challenges are addressed, which could relate to risk exposure. It is noted that there are significant differences between the respondents among the variable. This could impact negatively on College processes since all College stakeholders need to be aware of the reporting of risks and the risk exposure of the College. It is through stakeholder participation that the risk management processes to enable College operations could be improved. This view is supported by Blunden and Thirwell (2010:21), who recommend the development of a reporting culture and a common organizational risk language. This is an important aspect for due consideration by the College management.

It can be deduced that by analysing the Kruskal Wallis scores concerning the six risk strategy themes, that:

- “Understanding the Setting and Control Environment” has significant differences among the respondents concerning 8 of its 12 sub-themes;
- Regarding “Risk Identification”, all 5 variables have significant differences among respondents;
- “Risk Assessment” has significant differences among all the respondents of the 6 sub-themes;
- “Risk Control” has noteworthy differences among the respondents in 4 of its 6 sub-themes;
- “Risk Monitoring” has substantial differences in all 6 of its sub-themes among the respondents; and
- Regarding “Risk Reporting” all 5 sub-themes have vital differences among the respondents.

This translates to 34 of the 40 or 85% of the sub-theme variables having significant differences among the survey respondents, who provided different variations on their perceptions of the statements comprising the 6 risk strategy themes. This infers that there is a lack of consensus among the respondents regarding their responses. This was representative of significant variations in mean values of the respondents on the establishment of a College risk culture which has a Kruskal Wallis p-value of 0.000. Varied responses were reflected where the respondents scored differently regarding their awareness of the College risk strategy, which corroborates why 85% of the responses varied significantly amongst the respondents. This finding links with 1.7 of Annexure G [Survey Cross-tabs], where 41.8% were unsure about the risk management culture in the College. There is an absence of a common vision regarding the risk strategy and hence the lack of consensus among the respondents. Sixty-two percent of these respondents were unsure about an operational scan being undertaken before the risk identification process, which represents a relatively high amount of stakeholders not being sure about the preliminary steps of risk management being implemented. By analysing the risk strategy using mean value and the Kruskal Wallis scores and comparing these scores to survey cross-tabs findings, it is inferred that the risk management strategy is ineffectively implemented in the College. This is an important finding for the College’s oversight role.

5.6 HYPOTHESIS TESTING

The traditional approach to reporting a result requires a statement of statistical significance. A p-value is generated from a test statistic. A significant result is indicated by the Fisher's Exact Test with " $p < 0.05$ ". This therefore implies that all values with p-values more than 0.05 do not have a significant relationship between the respondents. A second Chi-Square Test was performed to determine whether there was a statistically significant relationship between the variables (rows versus columns). The null hypothesis states that there is no association between the two. The alternate hypothesis indicates that there is an association.

Annexure G represents the survey cross-tab rating information for all 3 respondents in the questionnaires and how they reacted to each risk variable from the 6 main risk objective themes. Each respondent was allocated a percentage value in support of responses 'strongly disagree', 'disagree', 'unsure', 'agree' and 'strongly agree'. Each set of response was allocated a Fisher's Exact p-value which referred to or represents the level of significance of the relationships of the respondents in relation to the response of each risk variable from the 6 main risk themes. As an example, the Fisher's Exact Test p-value between "College has assessed its risks" and "Group" is 0.003 which is less than 0.05. This means that there is a significant relationship between the responding variables. The group of the respondents played a significant role in terms of how they viewed that the College has a risk management policy, as significant variations in their responses were observed. After Annexure G [Survey Cross-tabs] was analysed, it was observed that from the 40 statements that the survey respondents had to answer, only 4 statements revealed that there was no significant variation between the respondents based on the p-values being more than 0.05. This meant that there were common responses or perceptions that were common for 4 risk sub-themes amongst the respondents. The risk statements that reflect no significant variations amongst the respondents which represent a common view or perception are as follows:

- An operational environment scan was done before the identification of risks;
- College has a risk management policy;
- College has risk management procedures; and
- College has clear roles and responsibilities for risk management; and

From 40 risk statements about the College, respondents shared a common perception on only 4 of these variables. This implies that 90% of the risk statements have significant variations in the way the survey respondents viewed the risk variables. Through the survey cross-tab

analysis it is also found that the risk management stakeholders do not have a common understanding about the risk management function in the College. It is representative of a fragmented approach lacking a common impetus for the risk strategy. Young (2008:96) states that the risk management structure together with its systems is fundamental to the risk function. Through the analysis, it has been established that the survey respondents provided a variation in responses on 90% of the risk statements concerning risk management implementation in the College. This is representative of a weak risk management system within the College, which confirms the findings from the Kruskal Wallis Test findings.

5.7 CORRELATIONS

Bivariate correlation was also performed on the (ordinal) data. The results are found in the data sheet as Annexure H. The results indicate the following patterns:

- Positive values indicate a directly proportional relationship between the variables;
- A negative value indicates an inverse relationship; and
- All significant relationships are indicated by a * or **.

As an example and by viewing the staff correlations, the correlation value between “The College has risk management policy” and “College has risk management procedures” has a correlation value of 0.845**. This is a significantly related relationship. Respondents indicate that through a risk management policy, risk management procedures would be enabled. The responses from the survey participants are analysed below.

By referring to Annexure H and regarding the staff responses concerning “An operational scan was done before the identification of risks” and the “College has clear roles and responsibilities for risk management” has a correlation value of 0.301*, indicating a significant relationship as to how Staff perceive these variables. It is also observed that there are only 2 positive correlation values indicating directly proportional relationships. As an example, “An operational scan was done before the identification of risks” and “Staff stakeholder representatives were part of risk identification development” has a value of 0.241 which relates to a direct proportionality. This indicates that based on the roles being clear, an operational scan was undertaken. Apart from the 2 positive values, the rest of the relationships between all the variables for the staff analysis are significant as they are represented by * and **. As an example, by referring to “College structures are in place to

monitor risks” and “Awareness of risk monitoring” which has a value of 0.669**, this indicates a significant relationship implying that through the risk management structures, staff would become aware of risk monitoring activities. It is also noted that there is an absence of negative correlation values which indicates that there are no inverse relationship perceptions. Notably, the Staff correlation scores reflect significant perceptions about the relationships between the risk variables which are valuable for the research, as this projects a positive outlook for risk implementation in the College.

By referring to the responses from the Student representation in Annexure H and regarding “An operational scan was done before the identification of risks” and “College has clear roles and responsibilities for risk management”, a correlation value of 0.263 representing a direct proportionality relationship by the respondents was noted. The correlation value between “The College has risk management policy” and “College has risk management procedures” has a correlation value of 0.008. This is representative of a positive relationship, unlike the response by staff which reflected a significant relationship. It is also noted that there is a small proportion of correlations between variables having significant relationships.

As an example, “Risk control measures in place to manage risk” and “College structures are in place to monitor risk” has a value of 0.584**, having a significant relationship. This relates to risk control measures being managed through College risk structures. By referring to “College has risk management procedures” and “Action plans exist to mitigate or eliminate risks”, a value of 0.334 indicates a positive relationship, implying that the risk management procedures would enable action plans to be developed; these variables have a direct proportional effect on each other. An example of an indirect relationship is expressed by “Presence of an organizational structure for risk management” and “Awareness of risk monitoring progress” having a correlation value of -0.375. It can be interpreted that an organizational structure does not necessarily lead to an awareness of risk monitoring progress among Student respondents. There were many correlations that produced inverse relations among the risk variables regarding Students’ perceptions on risk. This links to the Survey Cross-tab scores which reflect that 20% strongly disagreed about being made aware of risk management in the College, whilst 25% were unsure and 40% disagreed that they were made aware of risk management processes in the College. This represents 85% of Student respondent who did not agree about being made aware of risk management processes in the

College. This is seen to be critical as the Student body which is a major College stakeholder would not be in a position to support this strategic function in the College, thereby weakening risk management implementation in the College.

Regarding responses from the Operational Management representation on Annexure H and the notion that “An operational scan was done before the identification of risks” and the “College has clear roles and responsibilities for risk management”, there is a correlation value of - 0.185 representing an inverse relationship and in opposition with the sentiments of the staff and student respondents. As an example, by referring to “College structures are in place to monitor risks” and “Awareness of risk monitoring” having a value of 0.653*, this indicates a significant relationship, implying that through the risk management structures, the College stakeholders would become aware of risk monitoring activities. This is also in agreement with the sentiments of the staff respondents and opposite to the perceptions of the student representation. “College has risk management procedures” and “College has clear roles and responsibilities for risk management ” has a correlation value of 0.197, which represents a directly proportional relationship between these variables relating to the roles and responsibilities being in place for risk management, given the presence of risk management procedures. Unlike the staff responses among variables having no inverse relationships, it has been observed that there is a presence of a few inverse relationships among variables regarding operational managements’ sentiments. There is fair distribution between directly proportional and significant relationships between variables regarding operational managements’ views.

The above reflect that there are more inverse relationships between variables concerning students when compared to staff and operational managers’ attitudes. The responses between the relationships that are significant between variables are the highest for staff. Operational Managers have a fair distribution of significant and directly proportional relationships with a few inverse relationships between the variables. There were no inverse relationships between variables observed regarding staff sentiments.

By analysing “An operational scan was done before the identification of risks” and the “College has clear roles and responsibilities for risk management” for Staff, Student and Operational Management respondents, it is observed that each of their responses was significantly different, representing correlation scores of 0.301*, 0.263 and -0.185

respectively for the same risk relationship. On examining “College has risk management procedures” and “Strategic and operational environments were considered in the risk identification process”, 3 different perceptions about the above risk relations from the respondents were presented, where their correlation scores were 0.581**, -0.214 and 0.486.

The above analysis is indicative of a difference of perceptions on the same risk relationships within the College, affirming the findings of the Kruskal Wallis Test and the Survey Cross-tab analysis of a fragmentation or varied responses regarding risk functions within the College. The correlation analysis confirms that based on the varied perceptions about the risk elements within the College, the risk management strategy is deemed to be weak, linked to the characteristics of ineffective and inefficient implementation.

5.8 ANALYSIS OF QUESTIONNAIRE AND INTERVIEW RESPONSES

The interviewees’ responses are recorded in terms of questions posed regarding the research objectives below. Their responses are analysed and also compared to the responses from the survey respondents [staff, student representatives and operational managers] who were issued with questionnaires. As a result, there was an analysis of qualitative and quantitative data. The quantitative data is sourced from Annexure G as attached. The qualitative interview responses appear in Annexure I.

5.8.1 Understanding the Setting and Control Environment

a) Was there an organisational scan undertaken? Explain.

There is 100% consensus among the Senior Managers [SM] regarding the scanning of the risk environment in the College through mechanisms such as the internal audit function, risk assessment process and the external audit function. However, the survey [staff, student representation and operational managers] quantitative data reflects that only 21.5% agree with an organizational scan being undertaken. More than half these respondents [Questionnaires] comprising 62%, were unsure whether the organizational scan was undertaken. There is a close correlation of students and Operational Managers [OM] being unsure of this function occurring, namely, 55% and 57.1% respectively - refer to 1.1 of Annexure G. The author Sorge (2002:96) affirms this by remarking that “in the strategic

decision-making process, environmental scanning is a part of the overall functioning of the organization.” It is observed that the College senior management had undertaken a scan of the risk environment, but 62% of the surveyed respondents are unaware of this exercise. This could have a negative impact on the College, as it could affect the College risk culture, thereby negatively influencing the effectiveness of the College risk management strategy. The scores further reveal that College stakeholders are unaware of the risk environment being scanned. This could result in stakeholders having different operational perceptions of the College in contrast to a common vision for the organization.

b) Does the College have a risk management policy?

Only 67% of the SM agreed with the College having a risk management policy while 1 of the interviewees was unsure if the policy exists. The quantitative data from the questionnaire survey reveals that only 55.6% of the staff and 50% of the operational management agreed with the SM. It is noted that 50% of the student respondents were unsure as to whether the College has a risk management policy - refer to 1.2 of Annexure G. Cunningham and Cordeiro (2009:346) support Young (2008:25) by remarking that a crucial approach of operationalizing risk management is through the development of concise policies and procedures. The College has an electronic ISO 9001:2008 Quality Management System [QMS] which documents all its policies, procedures and documents. After viewing the QMS system, it could not be verified that a College risk management policy exists. These risk proponents emphasize the need for a risk policy which in turn would determine the protocols for risk strategy in the College. In the absence of such a policy, the College is negatively exposed to implementing a successful risk program.

c) Does the College have risk management procedures?

There is 100% consensus by the SM that the College lacks risk management procedures. Only 48.1% of the survey respondents agreed that the College has risk management procedures, while 34.2% were unsure of this mechanism. At least 64.3% of this score is representative of the operational managers. The senior management agreed that there are no procedures for risk management, while 64.3% of OM believed that these procedures are in place. Students representing 40% were unsure as to whether these procedures exist or not -

refer to 1.3 of Annexure G. Risk management aims to identify and establish a structured approach to the management of risks which envisages achieving a risk management environment, cultural awareness, roles and responsibilities and a common understanding of risk in the organization. The risk management process is a “systematic application of risk policies, procedures and practices through the identification, evaluation, control, financing and monitoring of risks”, as pointed out by Young (2008:25). By viewing the College’s QMS system, it could not be verified that College risk management procedures exist. The system reflects that there are currently operational procedures for general business functions. Based on the absence of a risk policy, the College lacks risk procedures which lead to a deficiency of guidelines as to how risk must be implemented in the College, resulting in ineffectiveness of the risk strategy.

d) Does the College have an organisational structure for risk management?

All SMs concur that there is an absence of an organizational structure for risk management, reflecting a 100% consensus on this issue. However, 78.6% of OM believed that an organizational structure exists for risk management, while 48.9% of Staff supported this notion. It was observed that 40% of Students disagreed about a structure for risk. Only 48.1% of all respondents were sure and 27.8% were unsure about the organizational structure for risk - refer to 1.4 of Annexure G. Jackson *et al.* (2009:4) affirm that an organization’s policies, procedures, and organizational structure are a representation of the control environment which is part of the risk management environment. The College SM are in agreement that an organizational structure for risk management is lacking; however, 78.6% of operational management [OM] believed that the structure exists. This represents conflicting views from a management perspective. Based on a deficiency of an organizational structure for risk implementation, the risk strategy is adversely impacted. It is a view that the College a risk management structure be devised by the College for the successful implementation of risk processes.

e) Are there clear roles and responsibilities to enable the risk management process?

The SM was unanimous that there were no clear roles and responsibilities to enable risk management in the College. However, 63.4% of the OMs believed that clear roles and responsibilities exist to enable risk management, which is conflicting with the sentiments expressed by the SM. It was observed that 44.4% of students, 55.1% of staff and 28.6% of Operational Managers were unsure about this function - refer to 1.5 of Annexure G. It is pointed out by Young (2008:25) that risk management aims to identify and establish a structured approach to the management of risks which envisages achieving a risk management environment, cultural awareness, roles and responsibilities and a common understanding of risk in the organization. The SM confirms that this critical function is non-existent despite 63.4% of OMs thinking that clear roles and responsibilities for risk exists. This is representative of conflicting views from a management perspective. It stands to reason that in the absence of a risk management structure, roles and responsibilities of risk role-players are weakened. This can be corrected by generating a risk policy which will delineate roles and responsibilities of staff in their risk functions.

In summary, and concerning “Understanding the Setting and Control Environment” where 5 variables were analysed both quantitatively and qualitatively, it was found that 4 risk activities concerning this objective are not being implemented, thereby weakening the organization’s current risk strategy. This is a significant finding for due consideration by the College.

5.8.2 Implementation of Risk Identification Strategies

a) What process was implemented to identify risks?

There was 67% consensus amongst the SMs as to what process was implemented to identify risks: mentioned were the internal audit process, two risk workshops and the risk register. Two SMs agreed that an audit process was used to identify risks. Further, it was revealed that 43% of the survey respondents were unsure about any process being implemented to identify risks. However; 78.6% of the OM agreed with FS that a risk workshop was held to identify risks. Only 28.9% of staff that were surveyed agreed with a workshop being held to identify risks - refer to 2.2 of Annexure G. Blunden and Thirlwell (2010:90) recommend the use of workshops, questionnaires and interviews as examples as processes to identify risks. The

method implemented must be appropriate for the determination of the process. There was general consensus that a workshop was the mechanism used to identify risks, which is also upheld by authors Blunden and Thirlwell. This workshop was attended by all management personnel who undertook the role to identify College operational risks. The College was therefore, observed to have abided by the recommendations of the authors.

b) Who were involved in the risk identification development?

The SM is in agreement that the institutional management team comprising the rector, deputy rectors, assistant directors and campus managers were involved in the risk identification development. However, only 35.1% of the surveyed respondents agreed that all stakeholders were involved in risk identification development. It is recognised that 36.7% of the surveyed respondents were unsure as to whether stakeholders were involved in risk identification. A good proportion of this, 53.3% representing Staff were unsure of stakeholder involvement in risk identification development - refer to 2.1 of Annexure G. Briers (2002:218) states that it is in the interest of all stakeholders who are considered in the enterprise-wide risk management program. However, Young (2008:35) proposes otherwise, stating that “risk management is the responsibility of all levels of management.” The College is observed to be following risk management principles of stakeholder involvement for the process of risk identification, which only included the general management known as the Institutional Management Team [IMT]. Wider stakeholder involvement is recommended as proposed by Briers above, in order to create effectiveness in the risk identification process.

c) Which environments were considered in this process?

The score revealed that 67% of the SM was in agreement that internal and external environments are considered in the risk identification process, as 1 member of the SM said that only the internal environment is considered. Furthermore, 45.6% of the respondents surveyed agreed that the strategic and operational environments were considered in risk identification. Of this percentage, 78.6% is represented by OM. However, 38% were unsure of this. A further 46.7% of staff surveyed was unsure about the strategic and operational environments were considered during risk identification - refer to 2.4 of Annexure G. Risk identification as proposed by Young (2008:57), enables the business environment to detect

risk exposure as well as inherent risk which can impact on the achievement of the business strategy. Alexander (2003:247), in contrast, refers to risk identification as a risk map detailing which of the risks applies to any business, process or organisational unit and to what degree. Risk identification must also include the monitoring of the external environment and trends. What is significant is that 67% of the SM confirms that internal and external environments were considered during risk identification which is supportive of risk management theory as proposed by Young and Alexander. However, only 45.6% of the surveyed respondents agreed with the SM that internal and external environments were considered during the risk identification process.

Concerning “Implementation of Risk Identification Strategies”, where 3 variables were analysed both quantitatively and qualitatively, it was found that all 3 risk activities concerning this objective is being adequately implemented, thereby adding value to the organization’s risk strategy. This affirms that the College is successful in implementing risk identification processes.

5.8.3 Mechanisms to Effectively Assess Risks

a) Explain the process of how risks were assessed?

Valsamakis *et al.* (2013:16) state that risk assessment is a process of quantifying the identified risks with the intention of determining its impact on the business. The assessment process can be a narrative process of bringing managers together to discuss risk exposure and gaps in the risk management process, as purported by Alexander (2003:248).

It has been observed that there is no consensus from SM regarding the process of risk assessment, as a variety of responses were provided such as the risk register, collective thinking, brainstorming, prioritizing the risk, peoples’ point of view , interviews with managers and meetings. Each of the above responses differs for members of senior management. This correlates to 57% of the survey respondents who were unsure regarding the quantification and rating of risks which measures how risks are assessed. It is noted that 66.7% of these respondents were staff and 65% of the student stakeholder representation who were unsure regarding this concept. Only 31.6% of the survey respondents agreed that a risk risks were quantified and rated. What is observed here is that 85.7% of this proportion is represented by operational management who is in disagreement with the responses from

senior management and who could not present a unified response regarding the process followed for risk assessment - refer to 3.4 of Annexure G. The risk assessment process is observed to be weak. This has consequences that College role-players would not have an understanding of the actual effect or impact of a risk. This therefore, places the College in a precarious situation with negative consequences. The constituting of the risk management structure could play a role in improving the process of risk assessment.

b) What mechanism was used to profile the risks?

Regarding SM interview responses, no consensus was reached to profile the risks. One member of SM said that a model of the financial auditing environment was implemented while the other two were unable to answer. One member of SM did not even respond to the question. Of note is that 49.4% of survey respondents were unsure regarding risk profiling correlating to SM's response as above. Only 36.7% of survey respondents agreed with risk profiling being implemented, where 64.3% of this is represented by OM - refer to 3.3 of Annexure G. According to Blunden and Thirlwell (2010:77), the assessment of risk considers an evaluation for likelihood (frequency) and impact (severity), where likelihood views how frequently a risk event will occur over a given period and is presented for example as a percentage. The risk assessment process concerning risk profiling is observed to be weak. Based on this, the College should implement the recommendation of the author to accurately evaluate its risks. This in turn must result in corrective measures to mitigate such risks. Having an understanding of the value of threats within the College will enable the College to respond relevantly to such a risk enabling effective risk processes.

Concerning "Mechanisms to Effectively Assess Risks" where 2 variables were analysed both quantitatively and qualitatively, it was found that all 2 risk activities concerning this objective being weakly implemented were noted, thereby weakening the organization's risk strategy. This affirms that the College is not successful in effectively assessing risks as no consensus could be obtained concerning SM's responses. One senior manager did not offer a response to the question.

5.8.4 Risk Control Strategies to Minimize or Eliminate Operational Risk

a) Do you have action plans for the control mechanisms?

There is 67% consensus that there are no action plans for the control mechanisms by SM. It was observed that 35.4% of survey respondents agreed that action plans are in place to control risks. Of note, 46.8% of the survey respondents were unsure that action plans exist. Half the amount of student respondents was unsure while 21.4% of operations managers disagreed and another 21.4% of OMs were unsure about the existence action plans being in place to eliminate risks - refer to 4.3 of Annexure G. Risk control is a process which is developed to facilitate action to eliminate or reduce the likelihood or impact of a risk event. The risk control process is recommended to be set the same time as the risk is identified which aims to mitigate the risk event, as noted by Blunden and Thirlwel (2010:83). The majority of SMs agree that there are no action plans in place as a control strategy for risk management, while 44.1% of survey respondents are unsure that such plans exist. This situation of a lack of action plans for risk control places the College in a position of operational weakness and exposed to internal and external organizational threats. This in turn will affect the successful attainment of College objectives. The generation of risk control action plans is a necessity, as outlined by the authors to enable effective risk mitigation.

b) Are there procedures in place to assist in risk control?

For this category, it was noted that 67% of SM agreed that procedures are in place to assist in risk control through policies, procedures and the Quality Management System as referred to by one senior manager. Furthermore, 31.69% of survey respondents agreed that risk control measures are in place to manage risks. However, 60% of staff surveyed were unsure that monitoring and review procedures are in place. The scores reveal that 64.3% of OM respondents agreed that risk control procedures exist. It was observed that there were similar scores for SM and OM that control measures exist - refer to 4.2 of Annexure G. Alexander (2003:248) outlines that some control measures include management oversight roles, the introduction of policies and procedures and other monitoring processes. Best practice implementation is also a control measure as practised by organisations. It is observed by viewing the QMS that the College does have policies and procedures and an organogram for line management; however, there are no risk policies and procedures. This would have the

effect where the College is unable to effectively respond to an operational threat, thereby exposing the College to organizational weakness. It is a necessity that the College generates the risk policy and relevant procedures for an effective risk program.

c) What over-sight structures are in place to control risks?

No consensus was reached regarding the existence of over-sight structures as there were varied responses such as internal and external audit function, the Quality unit for operational internal audit, College Council and council sub-committees. One senior manager said that there are no over-sight structures in place while another mentioned the presence of supervisors. It is seen that 48.1% of surveyed respondents were unsure whether over-sight structures exist. However; 38% of these respondents agreed that there are over-sight structures. Of this 40% of staff and 57.1% of operational managers surveyed agreed that over-sight structures are in place. This “uncertainty” between SM and surveyed respondents correlates in terms of the existence of an over-sight structure - refer to 4.6 of Annexure G. Young (2008) also concurs with Alexander (2003) that risk control measures can include the generation of policies and procedures, operational internal controls, management intervention in the form of decision-making, reporting and the development of an organizational structure to support the process. The College organogram does not cater specifically for risk management. The College is observed to be weak regarding over-sight structures to control risks. This is a serious consideration for the College in strategic planning around risk governance. Without the risk structure in place, the College is at risk regarding a successful risk program. At least half of the surveyed respondents were unsure about the existence of such structures.

Regarding the objective “Risk Control Strategies to Minimize or Eliminate Operational Risk” where 3 variables were analysed both quantitatively and qualitatively, it was found that all risk activities concerning this objective are being inadequately implemented, thereby weakening the organization’s risk strategy. This affirms that the College is not successful in implementing risk control strategies to minimize or eliminate operational risk, as no consensus could be obtained concerning SM’s responses.

5.8.5 Risk Monitoring

a) As a process owner, do you monitor your risks?

There was 67% consensus regarding a process owner monitoring risks. One of the responses was the inability to focus on risk monitoring because of the challenges being experienced. It was noted that 43% of surveyed respondents had awareness that risks are being monitored while 35.4% were unsure. Of the surveyed respondents, 46.7% of staff and 71.4% of the operational managers [OM] agreed that risks are being monitored - refer to 5.4 of Annexure G. Continuous risk monitoring is an “on-going” process implemented to determine the importance of risks, variations in the operational environment and the effectiveness of risk controls. This monitoring method ensues during the regular course of business activities by means of routine tasks, managerial activities and resolutions. Its advantage is that through this technique, a problem is identified on actual-time basis encouraging instant corrective actioning, Young (2008:116). Although there is consensus between SMs and OMs that process owners monitor their risks, there is no evidence that process owners track their risks from the risk register. It has been mentioned that each manager reports at IMT meetings on their specific challenges. The absence of a risk policy, relevant procedures and an organizational risk structure exacerbates the challenge of an in-effective monitoring program. The monitoring process is perceived to be as isolated actions. This necessitates that the College devise an organization-wide risk monitoring program as the current situation is reflective of a weakness regarding risk monitoring.

b) How are these risks monitored?

There was no consensus reached by SM regarding how risks are monitored. Monitoring of risks were varied, such as through overseeing the operations management through weekly reports, meetings, assessing the results of the cash-flow, monthly forecast monitoring, sub-committees and performance evaluations. Each senior manager responded differently yet are all operating in the same College system. This shows that there is an absence of a standardized risk monitoring mechanism. However, there is a 65% perception from Students that a risk monitoring structure is in place. One of these respondents mentioned that the College is not performing well in this regard, while 40.5% of survey respondents believed that there is a structure to monitor risks and 44.3% were unsure about the existence of such structures. These low percentages are in correlation with the senior who could not come to

consensus regarding how risks are monitored - refer to 5.1 of Annexure G. Young (2008:96) cites organizational structure as a pillar of risk control. The modern approach in risk management involves the formation of risk management structure or a fundamental risk function which is a governing body to ensure that effective and over-all risk management occurs. Continuous risk monitoring is an “on-going” process implemented to determine the importance of risks, variations in the operational environment and the effectiveness of risk controls, as recommended by Young (2008:116). The College is found to be weak in abiding by the theoretical prescripts regarding risk monitoring as purported by the author. The College’s QMS does not have evidence of risk monitoring procedures. It therefore, is incumbent on the College to develop its risk monitoring framework.

Concerning the objective “Risk Monitoring” where 2 variables were analysed both quantitatively and qualitatively, it was found that all 2 risk activities concerning this objective are being inadequately implemented, thereby weakening the organization’s risk strategy. This affirms that the College is not successful in effectively monitoring risks as no consensus could be obtained concerning SM’s responses.

5.8.6 Strategies to Report on Operational Risk

a) Is there a risk reporting mechanism to track risk management progress?

Two managers responded that there was no reporting mechanism in place. However, some of the responses regarding to reporting are through internal audit action plans, report to audit committee and management reports. This shows that there is no formal risk reporting mechanism in place. It was seen that 57% of the surveyed respondents were unsure that a reporting mechanism exists. Only 32.9% of the surveyed respondents agreed that a reporting mechanism exists. Importantly, 42.9% of operational managers were unsure about the risk reporting mechanism while 44.4% of staff agreed with a reporting mechanism in place to report on risk - refer to 6.1 of Annexure G. The does not have any evidence of a risk reporting mechanism, which is in conflict with Blunden and Thirlwell (2010:21), who mention that a reporting system needs to be established together with the development of a reporting culture and a common organizational risk language. The lack of a reporting mechanism represents a weakness in the implementation of the risk management strategy. The reporting structure would enable College stakeholders to be aware of the risk exposure in

the College as well as to recognize how the College is progressing regarding risk control. This is a form of communication that would enable them to understand their role in risk identification and mitigation.

b) Is there regular risk reporting from the senior management?

There was 67% consensus on not reporting by senior management. However, one SM responded that there is reporting to council and to DHET and reports to sub-committees of council. It can be observed that the senior management do not provide regular reporting on risk, while 32.9 % of surveyed respondents agreed on regular reporting by management. In contrast, 49.4% of surveyed respondents were unsure whether management reports on risk regularly. It is noted that 57.8% the staff surveyed were also unsure about regular risk reporting from management. There were no operations managers who strongly agreed that there were regular reporting from senior management - refer to 6.2 of Annexure G. Effective risk reporting generates management's involvement in the process of risk identification, assessment and control, thereby enhancing the organizations risk profile. Reporting transpires up and down the hierarchy of the business which needs to focus on the significant risks with risk indicators and that these risks are effectively coordinated, so that the reports lead to action as suggested by Blunden and Thirlwell (2010:21). There is consensus between the interviewees and survey respondents that regular risk reporting from senior management does **not** take place which is in opposition to what Blunden and Thirlwell recommend. Evidence reflects that fragmented reporting occurs. This takes place at senior management level, at the Audit and Risk Committee and at College Council meetings. Other stakeholders like the staff and students are unaware of the risks to which the College is exposed. The establishment of clear roles and responsibilities would alleviate this challenge.

c) Do other risk owners report on their risk management progress?

Two of the three senior managers agreed that other risk owners reported on their risk progress. One senior manager mentioned that this takes place through weekly, monthly and quarterly reporting on operational areas. However; 38% of surveyed respondents were unsure about this reporting progress, while 38% agreed that risk progress by other risk owners is reported on. A smaller percentage [19%] of these respondents disagreed that risk owners

report on risk progress, while 64.3% and 40% of operational managers and staff respectively agreed on the awareness of risk management progress - refer to 6.5 of Annexure G. The key objective of risk reporting is to communicate the operational risk assessment across all business areas, (Alexander, 2003:253). Sawyer *et al.* (1996:107) recommend that an efficient internal reporting system must consider that individuals should be required to report on matters for which they are responsible with due responsibility. There was no evidence to show that risk owners report on their risk management progress, which is contrary to what the SM had responded. On viewing IMT reports from management meetings, it was observed that managers did report on their operational challenges, but there was no evidence to show that their risks had been monitored and presented at these meeting in relation to risks that appear on the College's risk register. The formulation of the risk policy, its procedures and risk structure would mean that all relevant stakeholders would report on the risk program to relevant College stakeholders. This challenge of risk owners not reporting on the risk program further reinforces the risk weakness in the College's risk management processes.

Regarding the objective "Strategies to Report on Operational Risk" where 3 variables were analysed both quantitatively and qualitatively, it was found that all 3 risk activities concerning this objective are being ineffectively implemented, thereby weakening the organization's risk strategy. This affirms that the College is not successful in effectively implementing strategies to report on operational risk as no consensus could be obtained concerning SM's responses.

It therefore can be deduced that regarding the 6 research objectives that:

- Only one research objective is adequately being implemented by the College, namely, Risk Identification;
- One objective is not being implemented, namely, Understanding the Setting and Control Environment, and
- The remaining 4 objectives are being inadequately implemented.

This therefore, substantiates that only 1 of the 6 research objectives is being adequately implemented in the study on the College risk management strategy.

5.9. SUPPLEMENTARY OBSERVATIONS

Secondary sources of information were inspected such as policies and procedures on the electronic Quality Management System, management meeting minutes and process documents. It was established that there are no records for risk management policies and procedures. However, the College has a functional Audit and Risk Committee that meets according to set timeframes and reports risk management progress to the College Council. This affirms that the College has a functional governance role regarding risk management. Records reflect that the College management team comprising the rector, deputy rectors, assistant directors and campus managers undertook a basic workshop on risk management. As a collective, the management of the College identified and rated its risks. This process was followed by the generation of the College's risk register.

5.10. CONCLUSION

To conclude, this chapter provided an analysis of data, statistics and other information relevant to the respondents from the quantitative survey and interviewees regarding the qualitative methodology. An analysis of respondents' biographical data was presented in terms of the use of graphical representations and statistics. The survey questionnaires were analyzed for reliability and data reduction using SPSS techniques such as Cronbach's Alpha, Kaiser-Meyer-Olkin, Bartlett's Test of Sphericity, bivariate correlation and hypothesis testing.

The quantitative data testing the survey respondents' views was presented in the form of crosstabs where the respondents' choice of 5 preferences was displayed as percentages. Cronbach's Alpha score revealed that all research objectives or research themes had a reliability coefficient of 0.70, indicating an acceptable degree of consistent scoring for the research objectives content. In all instances, conditions were satisfied to allow for factor analysis procedures regarding Kaiser-Meyer-Olkin and Bartlett's tests. Hypothesis testing generating the Fisher's Exact Test p-value and bivariate correlation were performed to compare significance of relationships between variables. The quantitative data analysis by means of Survey cross-tab analysis, the Kruskal Wallis Test and correlation tests consistently supported the suggestion that risk management implementation is ineffective and inefficient in the College.

An analysis between the quantitative and qualitative data was undertaken which comprised 18 questions representing critical risk activities for risk strategy implementation. It was observed that only 4 of the 18 key risk activities relating to the 6 research objectives were found to be adequately implemented. Furthermore, 5 of the 18 key risk activities were not being implemented while 8 activities were weak in implementation, further suggesting weaknesses in the risk strategy.

The chapter regarding research findings, analysis and discussions is followed by Chapter 6, as the final chapter, where conclusions are drawn and recommendations made to enable the TVET College to effectively implement its risk management strategy in the medium to long-term.

CHAPTER SIX

RESEARCH CONCLUSION AND RECOMMENDATIONS

6.1 INTRODUCTION

This chapter presents a summary as to whether the research problem has been answered, as well as insight into the limitations posed during the research process. It presents a basis for contributions to public and private sector organizations who are implementing a risk management strategy or to those institutions who aspire to implement such a strategy. Lastly, the chapter provides information regarding future research endeavours with the aim of contributing to further knowledge sharing and improvement concerning risk strategy implementation.

6.2 RESPONSE TO THE RESEARCH PROBLEM

The propositions of the FET Act as amended and the PFMA require Colleges to implement risk management functions. Risk management is a pertinent focus area warranted through this research study to **determine whether the College sustains “efficient, effective and clear” systems for risk management** according to legislative prescripts. The research problem to determine whether Elangeni TVET College sustains “effective, efficient and clear” systems for risk management has been modelled by the following research questions:

- Did the College create the control environment for risk management?
- Does the College have risk identification strategies in place?
- How does the TVET College assess risks?
- Are risk control mechanisms implemented?
- What monitoring mechanisms are applied to measure risks?
- What is the extent of risk reporting in the College?

These questions are responded to by referring to Chapter 5 which concerns “Analysis of Questionnaire and Interview Responses”.

- The responses to “Did the College create the control environment for risk management?” where 5 variables were analysed both quantitatively and qualitatively, are noted. It was observed that 4 risk variables concerning this question were not implemented, thereby weakening the organization’s risk strategy. It is therefore, be deduced that the College is ineffective regarding the question: “Did the College create the control environment for risk management?” The weakness of the risk management strategy is further exacerbated based on conflicting views from SMs and OMs regarding this core risk theme and it can be inferred that process implementation is unclear.
- Regarding ‘Does the College have risk identification strategies in place?’, it has been observed that 3 variables were analysed both quantitatively and qualitatively, and it was found that all 3 risk activities concerning this objective were being implemented, thereby adding value to the organization’s risk strategy. This affirms that the College is effective in implementing risk identification processes.
- Concerning “How does the TVET College assess risks?”, there were 2 variables that were analysed both quantitatively and qualitatively; it was found that all 2 risk activities concerning this objective were inadequately being implemented, thereby weakening the organization’s risk strategy. This affirms that the College is not successful in effectively assessing risks as no consensus could be obtained concerning the SM’s responses. One senior manager did not offer a response to the question.
- Relating to “Are risk control mechanisms implemented?”, where 3 variables were analysed quantitatively and qualitatively revealed that all risk activities concerning this objective are poorly being implemented. This affirms that the College is not successful in effectively and efficiently implementing risk control strategies to minimize or eliminate operational risk, as no consensus could be obtained concerning the SM’s responses.
- Concerning “What monitoring mechanisms are applied to measure risks?”, 2 variables were analysed quantitatively and qualitatively. It was found that all 2 risk activities concerning this objective are being inadequately being implemented. This affirms that

the College is not successful in effectively and efficiently monitoring risks, as no consensus could be obtained from the respondents.

- Regarding “What is the extent of risk reporting in the College?”, there were 3 variables analysed quantitatively and qualitatively. It was found that all 3 risk activities concerning this objective are ineffectively being implemented, thereby weakening the organization’s risk strategy. This affirms that the College is not effectively and efficiently implementing strategies to report on operational risk, as no consensus could be obtained the respondents.

It is therefore, reasoned that regarding the 6 research questions:

- Only 1 of the research questions is effectively and efficiently being responded to by the College, namely, “Risk Identification”;
- One research question is not being answered, namely, “Understanding the Setting and Control Environment”; and
- The remaining 4 research questions are unclearly, ineffectively and inefficiently being responded to, as established from the conflicting responses received from the qualitative and quantitative data.

This means that only 1 of the 6 research questions is effectively and efficiently being answered. The research problem is therefore, answered that the risk management strategy being implemented at Elangeni TVET College is unclear, ineffective and inefficient, as the intent of 5 of the 6 research questions are not being fulfilled in the learning institution. This has the implication that according to the CET Act, Chapter 5 section 25(1)(c), and regarding “Colleges’ need to implement internal audit and risk management functions which are not sub-standard to the standards set out in the Public Finance Management Act of 1999 [PFMA] (Act 1 of 1999 as amended)”, the College has been observed to be deficient in fulfilling this legislative requirement. This further infers that service delivery to its primary client, the students, could be ineffective and inefficient.

6.3 IMPLICATIONS OF THE RESEARCH FINDINGS

Blunden and Thirwell (2010:33) emphasise that risk management is not only about “avoiding losses or reducing their effect.” It goes further than that: it is about creating prospects for business value and continued operational improvement. Based on these propositions, the research undertaken managed to determine the areas of strengths, weaknesses and areas of opportunity for improvement concerning risk strategy implementation regarding Elangeni TVET College. The research material generated should be used by DHET to inform other public sector institutions both Provincially and nationally on successful risk strategy implementation. Since risk management implementation is a legislative requirement by TVET Colleges, all Colleges need to implement risk management strategies. This research report thereby can act as a catalyst for successful application of a risk strategy. The findings from the research further confirm the principles of good corporate governance as espoused in the King reports, which emphasise ethical leadership, performance evaluation, strategic leadership, risk management and compliance in risk governance. The decision by the senior management of Elangeni TVET College to allow this research to be undertaken would instil confidence in the College’s council committees such as the Audit and Risk Committee, as well as external and internal auditors, that it implements progressive operational processes in the form of a risk management strategy.

6.4 RESEARCH LIMITATIONS AND RECOMMENDATIONS

Effective communications between the College rector and the researcher ensured the availability of College source documents which were required for analysis. The busy nature of operational managers and staff posed a possible challenge. However, effective liaison and follow-up with the relevant respondents contributed to a reasonably high response rate. During the time of the research, an impending student strike action was looming, posing a threat to student class representatives participating in the survey. This was averted through negotiations with campus supervisors and student leadership. One of the senior managers refused to be audio-recorded during the interview session; however, his responses were recorded in writing by the researcher.

6.5 FURTHER RECOMMENDATIONS ARISING FROM THE RESEARCH

An efficiency and effectiveness rate of 17% is attributed to the risk management strategy of the College as only 1 of the 5 research questions has been satisfied. This therefore, results in a value of 83% inefficiency and ineffectiveness. In order for the College to improve its risk management implementation process, the following significant risk management strategies are recommended:

- As a priority, the College needs to generate a risk management policy. The policy would incorporate the critical elements of policy objectives, risk terminology, a legislative framework for policy implementation, what risk measures and controls need to be implemented, a clarification of roles and responsibilities and a communications and reporting framework;
- Of importance is that an organizational structure to facilitate the risk strategy needs to be considered;
- Emanating from the development of the risk policy, the institution needs to generate risk management procedures that will enable the policy to be implemented effectively;
- The procedure must be supported with the development of associated templates, forms and checklists to support risk management processes like risk assessment, risk control, risk monitoring and risk reporting; and
- The College must generate a program to promote the risk management culture within the organization to ensure stability and sustainability of the risk strategy.

If these recommendations are embedded into the College's operational processes, it will lead to cost-effective risk-taking and business optimization, as advocated by Blunden and Thirlwell (2010:67). It is further recommended that a comparative study be undertaken to measure the effectiveness of risk strategy implementation amongst all TVET Colleges in the Province with a view to obtaining a Provincial perspective on risk implementation.

6.6 CONCLUSION

In conclusion, it can be said that TVET Colleges need to implement systems that are “effective, efficient and economical” as a proposition in section 195(1)(b) of the Constitution. The PFMA is also in support of this legislation, where it is stated in section 38(a)(ii) and under general responsibilities of accounting officers, and in this case the College rector, that the rector must ensure that efficient, effective and clear systems of internal control, financial management and risk management are upheld within the College.

As can be observed, the TVET College is mandated legislatively to ensure that its operational processes are effective, efficient and economical with the intention of ensuring effective service delivery. Through the research findings, it was found that Elangeni TVET College implements risk management processes contrary to these prescripts. This would result in the College not fulfilling its mandate from DHET in providing quality education to skill the nation. This problem has been further exacerbated by the public service not receiving due consideration regarding risk management, as stated by the Public Service Commission (2003:i).

The citations below are from interview responses from two of three senior managers who were interviewed during the data collection process, who expressed their views on the risk management function at the College. Their comments are documented as follows:

AS – “One of the critical things that must be taken into consideration is the whole impact that the political environment has on TVET institutions. We can be the most sophisticated College with quality management systems and have every governance and management structure in place with everybody in compliance, but at any moment in terms of the political situation, that could de-stabilise operations at the College, and it does not matter what risk management strategy, procedures and policies are in place. Politics by nature is irrational, which makes it difficult to talk about what can be put in in place.”

FS – “The College is going through the motions of risk identification and classifying the risk. There is “lip service” in managing risks. No formal structures to manage risks. The risk register is a “dead document used only for compliance purposes. The organization is not focussed on risks, therefore it is reactive rather than proactive. We not focussed on managing risks.”

The responses from some of those participants interviewed affirm the research finding that the risk management strategy is ineffective, inefficient and unclear. However, the College had tabled its risk management challenges at an Audit and Risk Committee meeting where it was recommended that this function will be located in a unit where it can be managed effectively. This therefore, demonstrates the College's aspiration to continuously improve and confront operational areas of weakness.

The TVET Colleges, according to the White Paper for Post-School Education and Training (2013:11), are vital for the delivery of post-school education and training, and is a sector of strategic importance by DHET that enables communities to advance their expertise for the well-being of industry, commerce and the country at large, contributing to the alleviation of the "triple challenge" of unemployment, poverty and inequality.

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8. LIST OF ANNEXURES

8.1 Annexure A1: Ethical Clearance



21 April 2016

Mr Amil Nundkumar (214579444)
School of Management, IT & Governance
Westville Campus

Dear Mr Nundkumar,

Protocol reference number: HSS/0370/016M

Project title: A case study of risk management in a KwaZulu-Natal Technical and Vocational Education and Training College

Full Approval – Expedited Approval

With regards to your application received on 07 April 2016. The documents submitted have been accepted by the Humanities & Social Sciences Research Ethics Committee and **FULL APPROVAL** for the protocol has been granted.

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 Shenuka Singh (Chair)

/ms

Cc Supervisor: Dr M Subban
Cc Academic Leader Research: Professor Brian McArthur
Cc School Administrator: Ms Angela Pearce

Humanities & Social Sciences Research Ethics Committee

Dr Shenuka Singh (Chair)

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Website: www.ukzn.ac.za



Flagging Campuses: ■ Edgewood ■ Howard College ■ Medical School ■ Pietermaritzburg ■ Westville

8.2 Annexure A: Gatekeepers Letter



Elangeni College

For Further Education and Training



An ISO 9001 and OSHAS 18001 certified organisation.

9 September 2015

Mr Amil Nundkumar

Dear Sir

RE: CONFIRMATION

I hope this communication finds you well.

This is to confirm that no formal research has been conducted at Elangeni TVET College on "The Effectiveness of Risk Management Strategy"

The college, as part of its internal audit function and strategy, engages internal auditors. This is an external company sourced through a tender process every 3 years. The appointed internal auditors commence their internal audit function with a college risk analysis. Subsequent internal audits are conducted to test identified controls.

Please note that that permission is granted to undertake research in the college where you reflect the research topic: "A case study of risk management in a KwaZulu-Natal Technical and Vocational Education and Training College".

I hope the above information is useful.

Yours sincerely

M.M. Peters
ACTING RECTOR

8.3 Annexure A2: Language Practitioner's Letter

TO WHOM IT MAY CONCERN

29 November 2016

EDITING CERTIFICATE

This dissertation, entitled

A CASE STUDY OF RISK MANAGEMENT IN A KWAZULU-NATAL TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING COLLEGE, by **AMIL NUNDKUMAR**, has been edited to ensure technically accurate and contextually appropriate use of language for research at this level of study.

Yours sincerely

A handwritten signature in blue ink that reads "CM Israel". The signature is stylized with a long horizontal stroke at the bottom.

CM ISRAEL
BA Hons (UDW) MA (UND) MA (US) PhD (UNH)
Language Editor

8.4 Annexure B: Informed Consent Letter and Interview Schedule

UNIVERSITY OF KWAZULU-NATAL

School of Management, IT & Governance

Dear Respondent,

Master of Public Administration Research Project

Ethical Clearance Number HSS/0370/016M

Researcher: A. Nundkumar (083 787 5562)

Email address: amil.nundkumar@elangeni.edu.za

Supervisor: Dr. M. Subban (031 260 7763)

Research Office: Ms. M Snyman (031 260 8350)

I, Amil Nundkumar, a **Master of Public Administration** student, at the School of Management, IT & Governance of the University of Kwazulu Natal. You are invited to participate in a research project entitled “A case study of risk management in a KwaZulu-Natal Technical and Vocational Education and Training College”. This research project has received full ethical clearance from the university with Ethical Clearance Number HSS/0370/016M.

The aim of this study is to evaluate the effectiveness of the implementation of risk management processes within a Technical and Vocational Education and Training [TVET] College environment in KwaZulu-Natal. Elangeni TVET College is the study site. The case study will also determine whether the college sustains “efficient, effective and clear” systems for risk management in accordance with legislative parameters.

Through your participation as the senior management, I hope to understand whether the TVET College is effectively managing its operations, fulfilling its governance obligations and abiding by legislative requirements in order to implement an effective risk management strategy thereby realizing its strategic mandate to serve its communities effectively and efficiently.

The results of this interview are intended to contribute to Elangeni TVET College understanding how effectively it is in implementing its risk management strategy. The research findings of the case study can be used by other TVET Colleges as a means of improving their risk strategy. Collectively, the findings can be a mechanism to improve strategic college processes.

Your participation in this project is voluntary. You may refuse to participate or withdraw from the project at any time with no negative consequence. There will be no monetary gain from participating in this survey. Confidentiality and anonymity of records identifying you as a participant will be maintained by the School of Management, IT & Governance, UKZN.

If you have any questions or concerns about completing the interview or about participating in this study, you may contact me or my supervisor at the numbers listed above and by quoting Protocol Reference No. HSS/0370/016M. This interview should take about 45-60 minutes to complete.

Sincerely

Investigator’s signature _____ Date _____

CONSENT

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.

I hereby consent / do not consent to have this interview recorded.

SIGNATURE OF PARTICIPANT..... DATE.....

.....

Interview Schedule

Topic: A case study of risk management in a KwaZulu-Natal Technical and Vocational Education and Training College.

Interviewer: A. Nundkumar

Interviewee:

Location:

Date:

Time:

I am Amil Nundkumar, a student of the University of KwaZulu-Natal, South Africa. As part of my master's dissertation in Public Management and Governance, I am undertaking research into the effectiveness of the risk management strategy of a Technical Vocation Education and Training [TVET] College in KwaZulu-Natal. Through the interview process with you, I aim to gather information about the college relating to the following critical areas of the risk management strategy:

- Understanding the setting and control environment;
- The implementation of risk identification strategies;
- Mechanisms to effectively assess risk;
- Risk control strategies to minimise or eliminate operational risk;
- Risk measurement and monitoring; and
- Strategies to report on operational risk.

The findings from the above after the interview will provide evidence that will translate to the degree of effectiveness of the risk management strategy being implemented by the college.

Section A – Staff Information

1. Can you please introduce yourself?
2. What is your designation and operational function?
3. What are your qualifications?
4. How long have you been in the public service?
5. How long are you in your current position?

Section B – Risk Strategy Implementation

In order to establish the effectiveness of the risk management strategy at Elangeni TVET College, research data will be collected by means of the interview technique according to the identified key risk management themes. Should you need clarity on any aspects, you may request further explanations.

1. Understanding the setting and control environment

- 1.1 Was there an organisational scan undertaken? Explain.
- 1.2 Does the college have a risk management policy?
- 1.3 Does the college have risk management procedures?
- 1.4 Does the college have an organisational structure for risk management?
- 1.5 Are there clear roles and responsibilities to enable the risk management process?
- 1.6 Have you as a process owner been trained on risk management?

2. Implementation of risk identification strategies

- 2.1 What process was implemented to identify risks?
- 2.2 What factors informed the risk identification process?
- 2.3 Who were involved in the risk identification development?
- 2.4 Which environments were considered in this process?
- 2.5 What strategy was used in risk identification?

3. Mechanisms to effectively assess risks

- 3.1 Explain the process of how risks were assessed?
- 3.2 What factors were considered in assessing the risks?
- 3.3 What mechanism was used to profile the risks?
- 3.4 Did you consider external factors in the risk assessment?
- 3.5 Validate the above?
- 3.6 Did you consider internal factors in the risk assessment?
- 3.7 Validate the above?

4. Risk control strategies to minimise or eliminate operational risk

- 4.1 Name control mechanisms to manage risks?
- 4.2 Do you have action plans for the control mechanisms?
- 4.3 Regarding your operational area, what are the financial implications regarding risk control?
- 4.4 Are there procedures in place to assist in risk control?
- 4.5 What oversight structures are in place to control risks?

5. Risk monitoring

- 5.1 How are your risks measured?
- 5.2 As a process owner, do you monitor your risks?
- 5.3 How are these risks monitored?
- 5.4 What process is followed to decide on risk acceptability?
- 5.5 How do you deal with risk exposure?

6. Strategies to report on operational risk.

- 6.1 Is there a risk reporting mechanism to track risk management progress?
- 6.2 Is there regular risk reporting from the senior management?
- 6.3 As a risk owner, are your risks discussed in management meetings?
- 6.4 If so, what is the reporting format?
- 6.5 Do other risk owners report on their risks management progress?

We have now concluded the question and answer segment. Is there anything that you may want to contribute that will further add value to this research regarding the key risk strategy themes?

Your contribution in this research study is valued and will add significance to the operational management of TVET colleges. The information shared by you will remain confidential.

Thank you for your time and participation in the study.

8.5 Annexure C: Informed Consent Letter and Questionnaire - Operational Management

UNIVERSITY OF KWAZULU-NATAL

School of Management, IT & Governance

Dear Respondent,

Master of Public Administration Research Project

Ethical Clearance Number HSS/0370/016M

Researcher: A. Nundkumar (083 787 5562)

Email address: amil.nundkumar@elangeni.edu.za

Supervisor: Dr. M. Subban (031 260 7763)

Research Office: Ms. M Snyman (031 260 8350)

I, Amil Nundkumar, am a **Master of Public Administration** student in the School of Management, IT & Governance of the University of KwaZulu-Natal. You are invited to participate in a research project entitled “A case study of risk management in a KwaZulu-Natal Technical and Vocational Education and Training College”. This research project has received full ethical clearance from the university with Ethical Clearance Number HSS/0370/016M.

The aim of this study is to evaluate the effectiveness of the implementation of risk management processes within a Technical and Vocational Education and Training [TVET] College environment in KwaZulu-Natal. Elangeni TVET College is the study site. The case study will also determine whether the college sustains “efficient, effective and clear” systems for risk management in accordance with legislative parameters.

Through your participation as operations management, I hope to understand whether the TVET College is effectively managing its operations, fulfilling its governance obligations and abiding by legislative requirements in order to implement an effective risk management strategy thereby realizing its strategic mandate to serve its communities effectively and efficiently.

The results of the survey are intended to contribute to Elangeni TVET College understanding of the effectiveness in implementing its risk management strategy. The research findings of the case study can be used by other TVET Colleges as a means of improving their risk strategy. Collectively, the findings can be a mechanism to improve strategic college processes.

Your participation in this project is voluntary. You may refuse to participate or withdraw from the project at any time with no negative consequence. There will be no monetary gain from participating in this survey. Confidentiality and anonymity of records identifying you as a participant will be maintained by the School of Management, IT & Governance of the university.

If you have any questions or concerns about completing the survey or about participating in this study, you may contact me or my supervisor at the numbers listed above and by quoting Protocol Reference No. HSS/0370/016M. This survey should take about 30 minutes to complete.

Sincerely

Investigator’s signature _____ Date _____

CONSENT

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.

I hereby consent / do not consent to participating in the research survey.

SIGNATURE OF PARTICIPANT..... DATE.....

QUESTIONNAIRE: OPERATIONAL MANAGEMENT

INSTRUCTIONS

Please tick [√] a box where applicable to answer all questions. The questionnaire is categorized into 2 distinctive sections [A & B]. Section A concerns your biographical information. Section B relates to Risk Strategy Implementation with 6 sub-sections. All information is purely for research purposes; therefore the accuracy of your responses is important.

SECTION A: BIOGRAPHICAL INFORMATION

Occupational position:

Unit Manager	<input type="checkbox"/>
Campus Manager	<input type="checkbox"/>

Gender:

Male	<input type="checkbox"/>
Female	<input type="checkbox"/>

No. of years in the TVET college sector:

1-5	<input type="checkbox"/>
6-10	<input type="checkbox"/>
11-15	<input type="checkbox"/>
16- 20	<input type="checkbox"/>
>20	<input type="checkbox"/>

Highest qualification:

Grade 12	<input type="checkbox"/>
Certificate	<input type="checkbox"/>
Diploma	<input type="checkbox"/>
Higher Diploma	<input type="checkbox"/>
Degree	<input type="checkbox"/>
Post Graduate	<input type="checkbox"/>

SECTION B: RISK STRATEGY IMPLEMENTATION

1. Understanding the Control Environment

Variable	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
1.1 An operational environment scan was done before the identification of risks					
1.2 College has a risk management policy					
1.3 College has risk management procedures					
1.4 Presence of an organizational structure for risk management					
1.5 College has clear roles and responsibilities for risk management					
1.6 As a relevant stakeholder, I was made aware of risk management in the college					
1.7 College has established a risk culture					
1.8 Risk management has enabled effective college operations					
1.9 Continuous operational improvement has resulted through the risk strategy					
1.10 College environment is generally stable					
1.11 Risk management has enabled an improvement in pass rates					
1.12 Risk management has resulted in successful audit processes					

2. Risk Identification

Variable	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
2.1 Management stakeholder representatives were part of risk identification development					
2.2 Risk identification method, e.g. a workshop, was used to identify risks					
2.3 Aims and objectives for risk identification was determined					
2.4 Strategic and operational environments were considered in the risk identification process					
2.5 Presence of a structured approach of the risk identification process					

3. Risk Assessment

Variable	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
3.1 Received capacity building in order to assess risks effectively					
3.2 Significance of the risk in relation to the financial loss was considered					
3.3 Risks were profiled according to frequency and its impact					
3.4 Identified risks were quantified and rated					
3.5 Risk assessment framework was identified and implemented					
3.6 College has assessed its risks					

4. Risk Control

Variable	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
4.1 Awareness of controlling operational risk					
4.2 Risk control measures are in place to manage risks					
4.3 Action plans exist to mitigate or eliminate risks					
4.4 Risk financing has been considered as part of the budget process					
4.5 Risk controls are monitored and reviewed for effectiveness					
4.6 Presence of oversight structures to control risks					

5. Risk Monitoring

Variable	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
5.1 College structures are in place to monitor risks					
5.2 Received capacity building on risk monitoring					
5.3 Awareness of measurement of operational risks					
5.4 Awareness of risk monitoring					
5.5 Ability to identify new risks through risk monitoring					

5.6 Risk monitoring has enabled proactive college management					
--	--	--	--	--	--

6. Risk Reporting

Variable	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
6.1 Presence of risk reporting mechanisms to track risk management progress					
6.2 Evidence of regular risk reporting from management					
6.3 Discussions in meetings of risks from the risk report					
6.4 Evidence of a format for risk reporting					
6.5 Awareness of risk management progress					

End of Questionnaire!

Thank you for being part of research that will enable the TVET college sector to continuously improve. Your confidentiality will be assured.

8.6 Annexure D: Informed Consent Letter and Questionnaire - Staff

UNIVERSITY OF KWAZULU-NATAL

School of Management, IT & Governance

Dear Respondent,

Master of Public Administration Research Project

Ethical Clearance Number HSS/0370/016M

Researcher: A. Nundkumar (083 787 5562)

Email address: amil.nundkumar@elangeni.edu.za

Supervisor: Dr. M. Subban (031 260 7763)

Research Office: Ms. M Snyman (031 260 8350)

I, Amil Nundkumar, am a **Master of Public Administration** student in the School of Management, IT & Governance of the University of KwaZulu-Natal. You are invited to participate in a research project entitled “A case study of risk management in a KwaZulu-Natal Technical and Vocational Education and Training College”. This research project has received full ethical clearance from the university with Ethical Clearance Number HSS/0370/016M.

The aim of this study is to evaluate the effectiveness of the implementation of risk management processes within a Technical and Vocational Education and Training [TVET] College environment in KwaZulu-Natal. Elangeni TVET College is the study site. The case study will also determine whether the college sustains “efficient, effective and clear” systems for risk management in accordance with legislative parameters.

Through your participation as staff, I hope to understand whether the TVET College is effectively managing its operations, fulfilling its governance obligations and abiding by legislative requirements in order to implement an effective risk management strategy thereby realizing its strategic mandate to serve its communities effectively and efficiently.

The results of the survey are intended to contribute to Elangeni TVET College understanding of the effectiveness in implementing its risk management strategy. The research findings of the case study can be used by other TVET Colleges as a means of improving their risk strategy. Collectively, the findings can be a mechanism to improve strategic college processes.

Your participation in this project is voluntary. You may refuse to participate or withdraw from the project at any time with no negative consequence. There will be no monetary gain from participating in this survey. Confidentiality and anonymity of records identifying you as a participant will be maintained by the School of Management, IT & Governance of the university.

If you have any questions or concerns about completing the survey or about participating in this study, you may contact me or my supervisor at the numbers listed above and by quoting Protocol Reference No. HSS/0370/016M. This survey should take about 30 minutes to complete.

Sincerely

Investigator’s signature _____ Date _____

CONSENT

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.

I hereby consent / do not consent to participating in the research survey.

SIGNATURE OF PARTICIPANT..... DATE.....

QUESTIONNAIRE – STAFF

INSTRUCTIONS

Please tick [√] a box where applicable to answer all questions. The questionnaire is categorized into 2 distinctive sections [A & B]. Section A concerns your biographical information. Section B relates to Risk Strategy Implementation with 6 sub-sections. All information is purely for research purposes; therefore the accuracy of your responses is important.

SECTION A: BIOGRAPHICAL INFORMATION

Occupational position:

Academic staff	<input type="checkbox"/>
Support staff	<input type="checkbox"/>

Gender:

Male	<input type="checkbox"/>
Female	<input type="checkbox"/>

No. of years in the TVET college sector:

1-5	<input type="checkbox"/>
6-10	<input type="checkbox"/>
11-15	<input type="checkbox"/>
16- 20	<input type="checkbox"/>
>20	<input type="checkbox"/>

Highest qualification:

Grade 12	<input type="checkbox"/>
Certificate	<input type="checkbox"/>
Diploma	<input type="checkbox"/>
Higher Diploma	<input type="checkbox"/>
Degree	<input type="checkbox"/>
Post Graduate	<input type="checkbox"/>

SECTION B: RISK STRATEGY IMPLEMENTATION

1. Understanding the Control Environment

Variable	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
1.1 An operational environment scan was done before the identification of risks					
1.2 College has a risk management policy					
1.3 College has risk management procedures					
1.4 Presence of an organizational structure for risk management					
1.5 College has clear roles and responsibilities for risk management					
1.6 As a relevant stakeholder, I was made aware of risk management in the college					
1.7 College has established a risk culture					
1.8 Risk management has enabled effective college operations					
1.9 Continuous operational improvement has resulted through the risk strategy					
1.10 College environment is generally stable					
1.11 Risk management has enabled an improvement in pass rates					
1.12 Risk management has resulted in successful audit processes					

2. Risk Identification

Variable	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
2.1 Staff stakeholder representatives were part of risk identification development					
2.2 Risk identification method, e.g. a workshop, was used to identify risks					
2.3 Aims and objectives for risk identification was determined					
2.4 Strategic and operational environments were considered in the risk identification process					
2.5 Presence of a structured approach of the risk identification process					

3. Risk Assessment

Variable	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
3.1 Received capacity building in order to assess risks effectively					
3.2 Significance of the risk in relation to the financial loss was considered					
3.3 Risks were profiled according to frequency and its impact					
3.4 Identified risks were quantified and rated					
3.5 Risk assessment framework was identified and implemented					
3.6 College has assessed its risks					

4. Risk Control

Variable	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
4.1 Awareness of controlling operational risk					
4.2 Risk control measures are in place to manage risks					
4.3 Action plans exist to mitigate or eliminate risks					
4.4 Risk financing has been considered as part the budget process					
4.5 Risk controls are monitored and reviewed for effectiveness					
4.6 Presence of oversight structures to control risks					

5. Risk Monitoring

Variable	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
5.1 College structures are in place to monitor risks					
5.2 Received capacity building on risk monitoring					
5.3 Awareness of measurement of operational risks					
5.4 Awareness of risk monitoring					
5.5 Ability to identify new risks through risk					

monitoring					
5.6 Risk monitoring has enabled proactive college management					

6. Risk Reporting

Variable	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
6.1 Presence of risk reporting mechanisms to track risk management progress					
6.2 Evidence of regular risk reporting from management					
6.3 Discussions in meetings of risks from the risk report					
6.4 Evidence of a format for risk reporting					
6.5 Awareness of risk management progress					

End of Questionnaire!

Thank you for being part of research that will enable the TVET college sector to continuously improve. Your confidentiality will be assured.

8.7 Annexure E: Informed Consent Letter and Questionnaire - Student Representatives

UNIVERSITY OF KWAZULU-NATAL

School of Management, IT & Governance

Dear Respondent,

Master of Public Administration Research Project

Ethical Clearance Number HSS/0370/016M

Researcher: A. Nundkumar (083 787 5562)

Email address: amil.nundkumar@elangeni.edu.za

Supervisor: Dr. M. Subban (031 260 7763)

Research Office: Ms. M Snyman (031 260 8350)

I, Amil Nundkumar, am a **Master of Public Administration** student in the School of Management, IT & Governance of the University of KwaZulu-Natal. You are invited to participate in a research project entitled “A case study of risk management in a KwaZulu-Natal Technical and Vocational Education and Training College”. This research project has received full ethical clearance from the university with Ethical Clearance Number HSS/0370/016M.

The aim of this study is to evaluate the effectiveness of the implementation of risk management processes within a Technical and Vocational Education and Training [TVET] College environment in KwaZulu-Natal. Elangeni TVET College is the study site. The case study will also determine whether the college sustains “efficient, effective and clear” systems for risk management in accordance with legislative parameters.

Through your participation as student representatives, I hope to understand whether the TVET College is effectively managing its operations, fulfilling its governance obligations and abiding by legislative requirements in order to implement an effective risk management strategy thereby realizing its strategic mandate to serve its communities effectively and efficiently.

The results of the survey are intended to contribute to Elangeni TVET College understanding of the effectiveness in implementing its risk management strategy. The research findings of the case study can be used by other TVET Colleges as a means of improving their risk strategy. Collectively, the findings can be a mechanism to improve strategic college processes.

Your participation in this project is voluntary. You may refuse to participate or withdraw from the project at any time with no negative consequence. There will be no monetary gain from participating in this survey. Confidentiality and anonymity of records identifying you as a participant will be maintained by the School of Management, IT & Governance of the university.

If you have any questions or concerns about completing the survey or about participating in this study, you may contact me or my supervisor at the numbers listed above and by quoting Protocol Reference No. HSS/0370/016M. This survey should take about 30 minutes to complete.

Sincerely

Investigator’s signature _____ Date _____

CONSENT

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.

I hereby consent / do not consent to participating in the research survey.

SIGNATURE OF PARTICIPANT..... DATE.....

QUESTIONNAIRE – STUDENT REPRESENTATION

INSTRUCTIONS

Please tick [√] a box where applicable to answer all questions. The questionnaire is categorized into 2 distinctive sections [A & B]. Section A concerns your biographical information. Section B relates to Risk Strategy Implementation with 6 sub-sections. All information is purely for research purposes; therefore the accuracy of your responses is important.

SECTION A: BIOGRAPHICAL INFORMATION

Academic study

Engineering	<input type="checkbox"/>
Business	<input type="checkbox"/>
Skills	<input type="checkbox"/>

Gender:

Male	<input type="checkbox"/>
Female	<input type="checkbox"/>

Age group

16 – 18	<input type="checkbox"/>
19 – 21	<input type="checkbox"/>
>21	<input type="checkbox"/>

Highest qualification

Grade 12	<input type="checkbox"/>
Grade 11	<input type="checkbox"/>
Grade 10	<input type="checkbox"/>
Other	<input type="checkbox"/>

SECTION B: RISK STRATEGY IMPLEMENTATION

1. Understanding the Control Environment

Variable	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
1.1 An operational environment scan was done before the identification of risks					
1.2 College has a risk management policy					
1.3 College has risk management procedures					
1.4 Presence of an organizational structure for risk management					
1.5 College has clear roles and responsibilities for risk management					
1.6 As a relevant stakeholder, I was made aware of risk management in the college					
1.7 College has established a risk culture					
1.8 Risk management has enabled effective college operations					
1.9 Continuous operational improvement has resulted through the risk strategy					
1.10 College environment is generally stable					
1.11 Risk management has enabled an improvement in pass rates					
1.12 Risk management has resulted in successful audit processes					

2. Risk Identification

Variable	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
2.1 Student stakeholder representatives were part of risk identification development					
2.2 Risk identification method, e.g. a workshop, was used to identify risks					
2.3 Aims and objectives for risk identification was determined					
2.4 Strategic and operational environments were considered in the risk identification process					
2.5 Presence of a structured approach of the risk identification process					

3. Risk Assessment

Variable	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
3.1 Received capacity building in order to assess risks effectively					
3.2 Significance of the risk in relation to the financial loss was considered					
3.3 Risks were profiled according to frequency and its impact					
3.4 Identified risks were quantified and rated					
3.5 Risk assessment framework was identified and implemented					
3.6 College has assessed its risks					

4. Risk Control

Variable	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
4.1 Awareness of controlling operational risk					
4.2 Risk control measures are in place to manage risks					
4.3 Action plans exist to mitigate or eliminate risks					
4.4 Risk financing has been considered as part the budget process					
4.5 Risk controls are monitored and reviewed for effectiveness					
4.6 Presence of oversight structures to control risks					

5. Risk Monitoring

Variable	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
5.1 College structures are in place to monitor risks					
5.2 Received capacity building on risk monitoring					
5.3 Awareness of measurement of operational risks					
5.4 Awareness of risk monitoring					
5.5 Ability to identify new risks through risk					

monitoring					
5.6 Risk monitoring has enabled proactive college management					

6. Risk Reporting

Variable	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
6.1 Presence of risk reporting mechanisms to track risk management progress					
6.2 Evidence of regular risk reporting from management					
6.3 Discussions in meetings of risks from the risk report					
6.4 Evidence of a format for risk reporting					
6.5 Awareness of risk management progress					

End of Questionnaire!

Thank you for being part of research that will enable the TVET college sector to continuously improve. Your confidentiality will be assured.

8.8 Annexure F: Rotated Component Matrix

Rotated Component Matrix

Regarding the rotated component matrix, observations are recorded in the presentation tables below for the risk strategy implementation variables.

B) Understanding the setting and control environment component matrix

	Component	
	1	2
An operational environment scan was done before the identification of risks	0,421	0,363
College has a risk management policy	0,207	0,746
College has risk management procedures	-0,077	0,810
Presence of an organizational structure for risk management	0,257	0,708
College has clear roles and responsibilities for risk management	0,409	0,473
As a relevant stakeholder, I was made aware of risk management in the college	0,555	0,537
College has established a risk culture	0,632	0,446
Risk management has enabled effective college operations	0,572	0,507
Continuous operational improvement has resulted through the risk strategy	0,792	0,132
College environment is generally stable	0,528	0,285
Risk management has enabled an improvement in pass rates	0,671	-0,067
Risk management has resulted in successful audit processes	0,777	0,222

Extraction Method: Principal Component Analysis.
 Rotation Method: Varimax with Kaiser Normalization.
 a. Rotation converged in 3 iterations.

C) Risk identification component matrix

	Component
	1
Stakeholder representatives were part of risk identification development	0,779
Risk identification method, e.g. a workshop, was used to identify risks	0,818
Aims and objectives for risk identification was determined	0,827
Strategic and operational environments were considered in the risk identification process	0,854
Presence of a structured approach of the risk identification process	0,877

Extraction Method: Principal Component Analysis.
 a. 1 component extracted.

D) Risk assessment component matrix

	Component
	1
Received capacity building in order to assess risks effectively	0,662
Significance of the risk in relation to the financial loss was considered	0,729
Risks were profiled according to frequency and its impact	0,724
Identified risks were quantified and rated	0,743

Risk assessment framework was identified and implemented	0,800
College has assessed its risks	0,776

Extraction Method: Principal Component Analysis.

- a. 1 component extracted.

E) Risk control component matrix

	Component 1
Awareness of controlling operational risk	0,753
Risk control measures are in place to manage risks	0,779
Action plans exist to mitigate or eliminate risks	0,800
Risk financing has been considered as part the budget process	0,580
Risk controls are monitored and reviewed for effectiveness	0,837
Presence of oversight structures to control risks	0,822

Extraction Method: Principal Component Analysis.

- a. 1 component extracted.

F) Risk monitoring component matrix

	Component 1
College structures are in place to monitor risks	0,768
Received capacity building on risk monitoring	0,798
Awareness of measurement of operational risks	0,819
Awareness of risk monitoring	0,858
Ability to identify new risks through risk monitoring	0,896
Risk monitoring has enabled proactive college management	0,710

Extraction Method: Principal Component Analysis.

- a. 1 component extracted.

G) Risk reporting component matrix

	Component 1
Presence of risk reporting mechanisms to track risk management progress	0,766
Evidence of regular risk reporting from management	0,840
Discussions in meetings of risks from the risk report	0,869
Evidence of a format for risk reporting	0,871
Awareness of risk management progress	0,940

Extraction Method: Principal Component Analysis.

- a. 1 component extracted

8.9 Annexure G: Survey Crosstabs Analysis

This annexure is a statistical response in the form of a raw count and percentage responses from the 3 types of respondents in the questionnaire survey. The 40 tables is a representation of the response levels with regard to 40 statements the participants had to respond to. The columns are representative of the 3 types of respondents namely staff, students [class representatives] and management [operations]. The rows represent counts [raw and percentage] of 5 preferences namely strongly agree, agree, unsure, disagree and strongly disagree. There are 6 risk management themes with 40 statements as follows:

1 UNDERSTANDING THE SETTING AND CONTROL ENVIRONMENT

1.1 An operational environment scan was done before the identification of risks

Crosstab						
		Group			Total	
		Staff	Students	Management		
An operational environment scan was done before the identification of risks	Strongly Disagree	Count	2	3	0	5
	% within Group	4,4%	15,0%	0,0%	6,3%	
Disagree	Count	2	2	0	4	
	% within Group	4,4%	10,0%	0,0%	5,1%	
Unsure	Count	30	11	8	49	
	% within Group	66,7%	55,0%	57,1%	62,0%	
Agree	Count	9	3	5	17	
	% within Group	20,0%	15,0%	35,7%	21,5%	
Strongly Agree	Count	2	1	1	4	
	% within Group	4,4%	5,0%	7,1%	5,1%	
Total	Count	45	20	14	79	
	% within Group	100,0%	100,0%	100,0%	100,0%	

Chi-Square Tests					
	Value	df	Significance	2-sided	1-sided
Pearson Chi-Square	7,497 ^a	8	0,484	0,495	
Likelihood Ratio	8,062	8	0,427	0,601	
Fisher's Exact Test	6,762			0,506	
Linear-by-Linear	.559 ^b	1	0,454	0,492	0,257
N of Valid Cases	79				

a. 11 cells (73.3%) have expected count less than 5. The minimum expected count is .748.

b. The standardized statistic is .748.

Fisher's Exact Test

6.762

0.506

1.2 College has a risk management policy

Crosstab					
		Group			Total
		Staff	Students	Managemen	
College has Strongly Disagree	Count	0	1	0	1
	% within Group	0,0%	5,0%	0,0%	1,3%
Disagree	Count	1	2	1	4
	% within Group	2,2%	10,0%	7,1%	5,1%
Unsure	Count	14	10	5	29
	% within Group	31,1%	50,0%	35,7%	36,7%
Agree	Count	25	5	7	37
	% within Group	55,6%	25,0%	50,0%	46,8%
Strongly Agree	Count	5	2	1	8
	% within Group	11,1%	10,0%	7,1%	10,1%
Total	Count	45	20	14	79
	% within Group	100,0%	100,0%	100,0%	100,0%

Chi-Square Tests						
	Value	df	Significance	2-sided Sig.	1-sided Sig.	Probability
Pearson Chi-Square	9,063 ^a	8	0,337	0,343		
Likelihood Ratio	9,138	8	0,331	0,417		
Fisher's Exact Test	9,502			0,231		
Linear-by-Linear	1,939 ^b	1	0,164	0,169	0,098	0,028
N of Valid Cases	79					

a. 9 cells (60.0%) have expected count less than 5. The minimum expected count is .

b. The standardized statistic is -1.393.

Fisher's Exact Test 9,502 0,231

1.3 College has risk management procedures

Crosstab					
		Group			Total
		Staff	Students	Managemen	
College has Disagree	Count	1	4	1	6
	% within Group	2,2%	20,0%	7,1%	7,6%
Unsure	Count	15	8	4	27
	% within Group	33,3%	40,0%	28,6%	34,2%
Agree	Count	24	5	9	38
	% within Group	53,3%	25,0%	64,3%	48,1%
Strongly Agree	Count	5	3	0	8
	% within Group	11,1%	15,0%	0,0%	10,1%
Total	Count	45	20	14	79
	% within Group	100,0%	100,0%	100,0%	100,0%

Chi-Square Tests						
	Value	df	Significance	2-sided Sig.	1-sided Sig.	Probability
Pearson Chi-Square	11,270 ^a	6	0,080	0,075		
Likelihood Ratio	12,417	6	0,053	0,077		
Fisher's Exact Test	10,591			0,069		
Linear-by-Linear	1,351 ^b	1	0,245	0,261	0,144	0,038
N of Valid Cases	79					

a. 7 cells (58.3%) have expected count less than 5. The minimum expected count is .

b. The standardized statistic is -1.162.

Fisher's Exact Test 10,591 0,069

1.4 Presence of an organizational structure for risk management

Crosstab					
		Group			Total
		Staff	Students	Management	
College has Disagree	Count	1	4	1	6
	% within Group	2,2%	20,0%	7,1%	7,6%
Unsure	Count	15	8	4	27
	% within Group	33,3%	40,0%	28,6%	34,2%
Agree	Count	24	5	9	38
	% within Group	53,3%	25,0%	64,3%	48,1%
Strongly Agree	Count	5	3	0	8
	% within Group	11,1%	15,0%	0,0%	10,1%
Total	Count	45	20	14	79
	% within Group	100,0%	100,0%	100,0%	100,0%

Chi-Square Tests					
	Value	df	Significance	2-sided Sig.	1-sided Probability
Pearson Chi-Square	11,270 ^a	6	0,080	0,075	
Likelihood Ratio	12,417	6	0,053	0,077	
Fisher's Exact Test	10,591			0,069	
Linear-by-Linear	1,351 ^b	1	0,245	0,261	0,144
N of Valid Cases	79				

a. 7 cells (58.3%) have expected count less than 5. The minimum expected count is .500.

b. The standardized statistic is -1.162.

Fisher's Exact Test 26,932 0,000

1.5 College has clear roles and responsibilities for risk management

Crosstab					
		Group			Total
		Staff	Students	Management	
College has Disagree	Count	3	2	0	5
	% within Group	6,7%	10,0%	0,0%	6,3%
Unsure	Count	20	11	4	35
	% within Group	44,4%	55,0%	28,6%	44,3%
Agree	Count	19	6	9	34
	% within Group	42,2%	30,0%	64,3%	43,0%
Strongly Agree	Count	3	1	1	5
	% within Group	6,7%	5,0%	7,1%	6,3%
Total	Count	45	20	14	79
	% within Group	100,0%	100,0%	100,0%	100,0%

Chi-Square Tests					
	Value	df	Significance	2-sided Sig.	1-sided Probability
Pearson Chi-Square	4,963 ^a	6	0,549	0,566	
Likelihood Ratio	5,764	6	0,450	0,590	
Fisher's Exact Test	4,835			0,545	
Linear-by-Linear	.776 ^b	1	0,378	0,416	0,219
N of Valid Cases	79				

a. 6 cells (50.0%) have expected count less than 5. The minimum expected count is .500.

b. The standardized statistic is .881.

Fisher's Exact Test 4,835 0,545

1.6 As a relevant stakeholder, I was made aware of risk management in the college * Group

Crosstab						
		Group			Total	
		Staff	Students	Management		
As a relevant stakeholder, I was made aware of risk management in the college	Strongly Disagree	Count	2	4	0	6
		% within Group	4,4%	20,0%	0,0%	7,6%
Disagree	Count	3	8	0	11	
	% within Group	6,7%	40,0%	0,0%	13,9%	
Unsure	Count	20	5	0	25	
	% within Group	44,4%	25,0%	0,0%	31,6%	
Agree	Count	14	2	10	26	
	% within Group	31,1%	10,0%	71,4%	32,9%	
Strongly Agree	Count	6	1	4	11	
	% within Group	13,3%	5,0%	28,6%	13,9%	
Total	Count	45	20	14	79	
	% within Group	100,0%	100,0%	100,0%	100,0%	

Chi-Square Tests					
	Value	df	Significance	2-sided	1-sided
Pearson Chi-Square	39,018 ^a	8	0,000	0,000	
Likelihood Ratio	41,636	8	0,000	0,000	
Fisher's Exact Test	34,430			0,000	
Linear-by-Linear Association	1,331 ^b	1	0,249	0,268	0,139
N of Valid Cases	79				

a. 9 cells (60.0%) have expected count less than 5. The minimum expected count is .500.

b. The standardized statistic is 1.154.

Fisher's Exact Test 34,430 0,000

1.7 College has established a risk culture

Crosstab						
		Group			Total	
		Staff	Students	Management		
College has established a risk culture	Strongly Disagree	Count	0	5	0	5
		% within Group	0,0%	25,0%	0,0%	6,3%
Disagree	Count	5	6	3	14	
	% within Group	11,1%	30,0%	21,4%	17,7%	
Unsure	Count	22	8	3	33	
	% within Group	48,9%	40,0%	21,4%	41,8%	
Agree	Count	16	1	7	24	
	% within Group	35,6%	5,0%	50,0%	30,4%	
Strongly Agree	Count	2	0	1	3	
	% within Group	4,4%	0,0%	7,1%	3,8%	
Total	Count	45	20	14	79	
	% within Group	100,0%	100,0%	100,0%	100,0%	

Chi-Square Tests					
	Value	df	Significance	2-sided	1-sided
Pearson Chi-Square	27,250 ^a	8	0,001	0,001	
Likelihood Ratio	29,043	8	0,000	0,000	
Fisher's Exact Test	24,129			0,000	
Linear-by-Linear Association	1,058 ^b	1	0,304	0,318	0,172
N of Valid Cases	79				

a. 9 cells (60.0%) have expected count less than 5. The minimum expected count is .500.

b. The standardized statistic is -1.028.

Fisher's Exact Test 24,129 0,000

1.8 Risk management has enabled effective college operations

Crosstab						
		Group			Total	
		Staff	Students	Management		
Risk management has enabled effective college operations	Strongly Disagree	Count	0	1	0	1
		% within Group	0,0%	5,0%	0,0%	1,3%
Disagree	Count	2	9	3	14	
	% within Group	4,4%	45,0%	21,4%	17,7%	
Unsure	Count	20	6	5	31	
	% within Group	44,4%	30,0%	35,7%	39,2%	
Agree	Count	19	4	5	28	
	% within Group	42,2%	20,0%	35,7%	35,4%	
Strongly Agree	Count	4	0	1	5	
	% within Group	8,9%	0,0%	7,1%	6,3%	
Total	Count	45	20	14	79	
	% within Group	100,0%	100,0%	100,0%	100,0%	

Chi-Square Tests						
	Value	df	Significance	2-sided Sig.	1-sided Sig.	Exact Probability
Pearson Chi-Square	20.399 ^a	8	0,009	0,006		
Likelihood Ratio	21,054	8	0,007	0,007		
Fisher's Exact Test	18,979			0,005		
Linear-by-Linear Association	4.254 ^b	1	0,039	0,044	0,024	0,008
N of Valid Cases	79					

a. 9 cells (60.0%) have expected count less than 5. The minimum expected count is 1.000.

b. The standardized statistic is -2.063.

Fisher's Exact Test 18,979 0,005

1.9 Continuous operational improvement has resulted through the risk strategy

Crosstab						
		Group			Total	
		Staff	Students	Management		
Continuous operational improvement has resulted through the risk strategy	Strongly Disagree	Count	0	3	0	3
		% within Group	0,0%	15,0%	0,0%	3,8%
Disagree	Count	1	6	1	8	
	% within Group	2,2%	30,0%	7,1%	10,1%	
Unsure	Count	25	7	7	39	
	% within Group	55,6%	35,0%	50,0%	49,4%	
Agree	Count	18	3	5	26	
	% within Group	40,0%	15,0%	35,7%	32,9%	
Strongly Agree	Count	1	1	1	3	
	% within Group	2,2%	5,0%	7,1%	3,8%	
Total	Count	45	20	14	79	
	% within Group	100,0%	100,0%	100,0%	100,0%	

Chi-Square Tests						
	Value	df	Significance	2-sided Sig.	1-sided Sig.	Exact Probability
Pearson Chi-Square	24.189 ^a	8	0,002	0,002		
Likelihood Ratio	22,678	8	0,004	0,004		
Fisher's Exact Test	20,224			0,002		
Linear-by-Linear Association	1.089 ^b	1	0,297	0,337	0,171	0,040
N of Valid Cases	79					

a. 10 cells (66.7%) have expected count less than 5. The minimum expected count is 1.000.

b. The standardized statistic is -1.044.

Fisher's Exact Test 20,224 0,002

1.10 College environment is generally stable

Crosstab					
		Group			Total
		Staff	Students	Management	
College env Strongly Disagree	Count	1	4	0	5
	% within Group	2,2%	20,0%	0,0%	6,3%
Disagree	Count	2	5	2	9
	% within Group	4,4%	25,0%	14,3%	11,4%
Unsure	Count	17	5	4	26
	% within Group	37,8%	25,0%	28,6%	32,9%
Agree	Count	23	4	7	34
	% within Group	51,1%	20,0%	50,0%	43,0%
Strongly Agree	Count	2	2	1	5
	% within Group	4,4%	10,0%	7,1%	6,3%
Total	Count	45	20	14	79
	% within Group	100,0%	100,0%	100,0%	100,0%

Chi-Square Tests						
	Value	df	Significance	2-sided Sig.	1-sided Sig.	Linear-by-Linear Probability
Pearson Chi-Square	18,034 ^a	8	0,021	0,019		
Likelihood Ratio	17,453	8	0,026	0,040		
Fisher's Exact Test	16,182			0,017		
Linear-by-Linear	.850 ^b	1	0,357	0,375	0,199	0,038
N of Valid Cases	79					

a. 9 cells (60.0%) have expected count less than 5. The minimum expected count is .922.
b. The standardized statistic is -.922.

Fisher's Exact Test 16,182 0,017

1.11 Risk management has enabled an improvement in pass rates

Crosstab					
		Group			Total
		Staff	Students	Management	
Risk management Strongly Disagree	Count	0	2	1	3
	% within Group	0,0%	10,0%	7,1%	3,8%
Disagree	Count	3	4	4	11
	% within Group	6,7%	20,0%	28,6%	13,9%
Unsure	Count	25	11	4	40
	% within Group	55,6%	55,0%	28,6%	50,6%
Agree	Count	16	3	5	24
	% within Group	35,6%	15,0%	35,7%	30,4%
Strongly Agree	Count	1	0	0	1
	% within Group	2,2%	0,0%	0,0%	1,3%
Total	Count	45	20	14	79
	% within Group	100,0%	100,0%	100,0%	100,0%

Chi-Square Tests						
	Value	df	Significance	2-sided Sig.	1-sided Sig.	Linear-by-Linear Probability
Pearson Chi-Square	13,014 ^a	8	0,111	0,095		
Likelihood Ratio	14,790	8	0,063	0,066		
Fisher's Exact Test	14,011			0,038		
Linear-by-Linear	5,181 ^b	1	0,023	0,027	0,015	0,006
N of Valid Cases	79					

a. 9 cells (60.0%) have expected count less than 5. The minimum expected count is .922.
b. The standardized statistic is -2.276.

Fisher's Exact Test 14,011 0,038

1.12 Risk management has resulted in successful audit processes

Crosstab					
		Group			Total
		Staff	Students	Managemer	
Risk mana; Strongly Di	Count	0	4	0	4
	% within Gr	0,0%	20,0%	0,0%	5,1%
Disagree	Count	1	5	2	8
	% within Gr	2,2%	25,0%	14,3%	10,1%
Unsure	Count	23	11	5	39
	% within Gr	51,1%	55,0%	35,7%	49,4%
Agree	Count	19	0	5	24
	% within Gr	42,2%	0,0%	35,7%	30,4%
Strongly A;	Count	2	0	2	4
	% within Gr	4,4%	0,0%	14,3%	5,1%
Total	Count	45	20	14	79
	% within Gr	100,0%	100,0%	100,0%	100,0%

Chi-Square Tests						
	Value	df	Significant	pt Sig. (2-	sig Sig. (1-	sigint Probability
Pearson C	31,552 ^a	8	0,000	0,000		
Likelihood	36,860	8	0,000	0,000		
Fisher's Ex	29,980			0,000		
Linear-by-	2,085 ^b	1	0,149	0,161	0,088	0,024
N of Valid C	79					

a. 10 cells (66,7%) have expected count less than 5. The minimum expected count is 1,000.

b. The standardized statistic is -1,444.

Fisher's Exact Test 29.980 0.000

2. RISK IDENTIFICATION

2.1 Stakeholder representatives were part of risk identification development

Crosstab					
		Group			Total
		Staff	Students	Managemer	
Student st. Strongly Di	Count	0	9	0	9
	% within Gr	0,0%	45,0%	0,0%	11,4%
Disagree	Count	3	5	1	9
	% within Gr	6,7%	25,0%	7,1%	11,4%
Unsure	Count	24	3	2	29
	% within Gr	53,3%	15,0%	14,3%	36,7%
Agree	Count	17	3	10	30
	% within Gr	37,8%	15,0%	71,4%	38,0%
Strongly A;	Count	1	0	1	2
	% within Gr	2,2%	0,0%	7,1%	2,5%
Total	Count	45	20	14	79
	% within Gr	100,0%	100,0%	100,0%	100,0%

Chi-Square Tests						
	Value	df	Significant	pt Sig. (2-	sig Sig. (1-	sigint Probability
Pearson C	47,383 ^a	8	0,000	0,000		
Likelihood	45,922	8	0,000	0,000		
Fisher's Ex	39,952			0,000		
Linear-by-	,103 ^b	1	0,749	0,778	0,399	0,053
N of Valid C	79					

a. 7 cells (46,7%) have expected count less than 5. The minimum expected count is 1,000.

b. The standardized statistic is -.320.

Fisher's Exact Test 39.952 0.000

2.2 Risk identification method, e.g. a workshop, was used to identify risks

Crosstab						
		Group			Total	
		Staff	Students	Managemer		
Risk identi	Strongly Di	Count	0	4	0	4
	% within G		0.0%	20.0%	0.0%	5.1%
Disagree	Count		3	6	0	9
	% within G		6.7%	30.0%	0.0%	11.4%
Unsure	Count		26	7	1	34
	% within G		57.8%	35.0%	7.1%	43.0%
Agree	Count		13	2	11	26
	% within G		28.9%	10.0%	78.6%	32.9%
Strongly Ag	Count		3	1	2	6
	% within G		6.7%	5.0%	14.3%	7.6%
Total	Count		45	20	14	79
	% within G		100.0%	100.0%	100.0%	100.0%

Chi-Square Tests						
	Value	df	Significanc	ct Sig. (2-sid	ct Sig. (1-sid	oint Probability
Pearson C	40.452 ^a	8	0.000	0.000		
Likelihood	40.121	8	0.000	0.000		
Fisher's Ex	33.998			0.000		
Linear-by-L	1.258 ^b	1	0.262	0.281	0.149	0.034
N of Valid C	79					

a. 9 cells (60.0%) have expected count less than 5. The minimum expected cou

b. The standardized statistic is 1.121.

Fisher's Exact Test 33.998 0.000

2.3 Aims and objectives for risk identification was determined

Crosstab						
		Group			Total	
		Staff	Students	Managemer		
Aims and o	Strongly Di	Count	0	3	0	3
	% within Gr		0.0%	15.0%	0.0%	3.8%
Disagree	Count		2	5	0	7
	% within Gr		4.4%	25.0%	0.0%	8.9%
Unsure	Count		23	8	2	33
	% within Gr		51.1%	40.0%	14.3%	41.8%
Agree	Count		17	3	11	31
	% within Gr		37.8%	15.0%	78.6%	39.2%
Strongly Ag	Count		3	1	1	5
	% within Gr		6.7%	5.0%	7.1%	6.3%
Total	Count		45	20	14	79
	% within Gr		100.0%	100.0%	100.0%	100.0%

Chi-Square Tests						
	Value	df	Significanc	ct Sig. (2-sid	ct Sig. (1-sid	oint Probability
Pearson C	29.064 ^a	8	0.000	0.000		
Likelihood	28.446	8	0.000	0.000		
Fisher's Ex	23.848			0.000		
Linear-by-L	.247 ^b	1	0.619	0.680	0.343	0.059
N of Valid C	79					

a. 9 cells (60.0%) have expected count less than 5. The minimum expected count is

b. The standardized statistic is .497.

Fisher's Exact Test 23.848 0.000

2.4 Strategic and operational environments were considered in the risk identification process

Crosstab						
		Group			Total	
		Staff	Students	Management		
Strategic a	Strongly Disagree	Count	0	3	0	3
	% within Group	0.0%	15.0%	0.0%	3.8%	
Disagree	Count	1	6	0	7	
	% within Group	2.2%	30.0%	0.0%	8.9%	
Unsure	Count	21	7	2	30	
	% within Group	46.7%	35.0%	14.3%	38.0%	
Agree	Count	22	3	11	36	
	% within Group	48.9%	15.0%	78.6%	45.6%	
Strongly Agree	Count	1	1	1	3	
	% within Group	2.2%	5.0%	7.1%	3.8%	
Total	Count	45	20	14	79	
	% within Group	100.0%	100.0%	100.0%	100.0%	

Chi-Square Tests						
	Value	df	Significance	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Contingency Coefficient
Pearson Chi-Square	33.765 ^a	8	0.000	0.000		
Likelihood Ratio	32.868	8	0.000	0.000		
Fisher's Exact Test	28.225			0.000		
Linear-by-Linear	.056 ^b	1	0.813	0.865	0.445	0.067
N of Valid Cases	79					

a. 9 cells (60.0%) have expected count less than 5. The minimum expected count is .237.
b. The standardized statistic is .237.

Fisher's Exact Test 28.225 0.000

2.5 Presence of a structured approach of the risk identification process

Crosstab						
		Group			Total	
		Staff	Students	Management		
Presence of	Strongly Disagree	Count	0	2	0	2
	% within Group	0.0%	10.0%	0.0%	2.5%	
Disagree	Count	1	5	1	7	
	% within Group	2.2%	25.0%	7.1%	8.9%	
Unsure	Count	23	12	4	39	
	% within Group	51.1%	60.0%	28.6%	49.4%	
Agree	Count	21	1	8	30	
	% within Group	46.7%	5.0%	57.1%	38.0%	
Strongly Agree	Count	0	0	1	1	
	% within Group	0.0%	0.0%	7.1%	1.3%	
Total	Count	45	20	14	79	
	% within Group	100.0%	100.0%	100.0%	100.0%	

Chi-Square Tests						
	Value	df	Significance	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Contingency Coefficient
Pearson Chi-Square	28.396 ^a	8	0.000	0.000		
Likelihood Ratio	29.174	8	0.000	0.000		
Fisher's Exact Test	26.035			0.000		
Linear-by-Linear	.292 ^b	1	0.589	0.627	0.327	0.066
N of Valid Cases	79					

a. 9 cells (60.0%) have expected count less than 5. The minimum expected count is .237.
b. The standardized statistic is -.540.

Fisher's Exact Test 26.035 0.000

3. RISK ASSESSMENT

3.1 Received capacity building in order to assess risks effectively

Crosstab						
		Group				
		Staff	Students	Managemer	Total	
Received c	Strongly Di	Count	1	4	2	7
	% within Gr		2,2%	20,0%	14,3%	8,9%
Disagree	Count	6	7	5	18	
	% within Gr		13,3%	35,0%	35,7%	22,8%
Unsure	Count	20	8	3	31	
	% within Gr		44,4%	40,0%	21,4%	39,2%
Agree	Count	16	0	4	20	
	% within Gr		35,6%	0,0%	28,6%	25,3%
Strongly A ₁	Count	2	1	0	3	
	% within Gr		4,4%	5,0%	0,0%	3,8%
Total	Count	45	20	14	79	
	% within Gr		100,0%	100,0%	100,0%	100,0%

Chi-Square Tests						
	Value	df	Significant	pt Sig. (2-si	pt Sig. (1-si	oint Probability
Pearson C	18,693 ^a	8	0,017	0,015		
Likelihood	24,405	8	0,002	0,003		
Fisher's Ex	21,051			0,002		
Linear-by-	8,045 ^b	1	0,005	0,005	0,003	0,001
N of Valid C	79					

a. 9 cells (60,0%) have expected count less than 5. The minimum expected cou
b. The standardized statistic is -2.836.

Fisher's Exact Test 21.051 0.002

3.2 Significance of the risk in relation to the financial loss was considered

Crosstab						
		Group				
		Staff	Students	Managemer	Total	
Significanc	Strongly Di	Count	0	3	0	3
	% within Gr		0,0%	15,0%	0,0%	3,8%
Disagree	Count	2	5	1	8	
	% within Gr		4,4%	25,0%	7,1%	10,1%
Unsure	Count	30	9	7	46	
	% within Gr		66,7%	45,0%	50,0%	58,2%
Agree	Count	11	2	6	19	
	% within Gr		24,4%	10,0%	42,9%	24,1%
Strongly A ₁	Count	2	1	0	3	
	% within Gr		4,4%	5,0%	0,0%	3,8%
Total	Count	45	20	14	79	
	% within Gr		100,0%	100,0%	100,0%	100,0%

Chi-Square Tests						
	Value	df	Significant	pt Sig. (2-si	pt Sig. (1-si	oint Probability
Pearson C	20,452 ^a	8	0,009	0,008		
Likelihood	19,595	8	0,012	0,015		
Fisher's Ex	16,374			0,012		
Linear-by-	.457 ^b	1	0,499	0,525	0,280	0,058
N of Valid C	79					

a. 11 cells (73,3%) have expected count less than 5. The minimum expected cou
b. The standardized statistic is -.676.

Fisher's Exact Test 16.374 0.012

3.3 Risks were profiled according to frequency and its impact

Crosstab					
		Group			Total
		Staff	Students	Management	
Risks were Strongly Disagree	Count	0	1	1	2
	% within Group	0.0%	5.0%	7.1%	2.5%
Disagree	Count	1	5	1	7
	% within Group	2.2%	25.0%	7.1%	8.9%
Unsure	Count	26	10	3	39
	% within Group	57.8%	50.0%	21.4%	49.4%
Agree	Count	17	3	9	29
	% within Group	37.8%	15.0%	64.3%	36.7%
Strongly Agree	Count	1	1	0	2
	% within Group	2.2%	5.0%	0.0%	2.5%
Total	Count	45	20	14	79
	% within Group	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests						
	Value	df	Significance	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Contingency Coefficient
Pearson Chi-Square	20.155 ^a	8	0.010	0.008		
Likelihood Ratio	20.831	8	0.008	0.006		
Fisher's Exact Test	19.746			0.002		
Linear-by-Linear	.412 ^b	1	0.521	0.571	0.292	0.061
N of Valid Cases	79					

a. 9 cells (60.0%) have expected count less than 5. The minimum expected count is .642.
b. The standardized statistic is -.642.

Fisher's Exact Test 19.746 0.002

3.4 Identified risks were quantified and rated

Crosstab					
		Group			Total
		Staff	Students	Management	
Identified risks: Strongly Disagree	Count	0	1	0	1
	% within Group	0.0%	5.0%	0.0%	1.3%
Disagree	Count	1	5	0	6
	% within Group	2.2%	25.0%	0.0%	7.6%
Unsure	Count	30	13	2	45
	% within Group	66.7%	65.0%	14.3%	57.0%
Agree	Count	12	1	12	25
	% within Group	26.7%	5.0%	85.7%	31.6%
Strongly Agree	Count	2	0	0	2
	% within Group	4.4%	0.0%	0.0%	2.5%
Total	Count	45	20	14	79
	% within Group	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests						
	Value	df	Significance	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Contingency Coefficient
Pearson Chi-Square	38.432 ^a	8	0.000	0.000		
Likelihood Ratio	37.909	8	0.000	0.000		
Fisher's Exact Test	32.881			0.000		
Linear-by-Linear	1.222 ^b	1	0.269	0.295	0.160	0.046
N of Valid Cases	79					

a. 10 cells (66.7%) have expected count less than 5. The minimum expected count is .106.
b. The standardized statistic is 1.106.

Fisher's Exact Test 32.881 0.000

3.5 Risk assessment framework was identified and implemented

Crosstab					
		Group			Total
		Staff	Students	Management	
Risk asses Disagree	Count	1	7	0	8
	% within G	2.2%	35.0%	0.0%	10.1%
Unsure	Count	29	12	3	44
	% within G	64.4%	60.0%	21.4%	55.7%
Agree	Count	12	1	11	24
	% within G	26.7%	5.0%	78.6%	30.4%
Strongly Agree	Count	3	0	0	3
	% within G	6.7%	0.0%	0.0%	3.8%
Total	Count	45	20	14	79
	% within G	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests						
	Value	df	Significant	2-sided Sig.	1-sided Sig.	Exact Probability
Pearson Chi-Square	37.464 ^a	6	0.000	0.000		
Likelihood Ratio	36.391	6	0.000	0.000		
Fisher's Exact Test	30.401			0.000		
Linear-by-Linear	.305 ^b	1	0.581	0.603	0.327	0.071
N of Valid Cases	79					

a. 7 cells (58.3%) have expected count less than 5. The minimum expected count is .552.
b. The standardized statistic is .552.

Fisher's Exact Test 30.401 0.000

3.6 College has assessed its risks

Crosstab					
		Group			Total
		Staff	Students	Management	
College has Strongly Disagree	Count	0	3	0	3
	% within G	0.0%	15.0%	0.0%	3.8%
Disagree	Count	3	3	2	8
	% within G	6.7%	15.0%	14.3%	10.1%
Unsure	Count	19	10	1	30
	% within G	42.2%	50.0%	7.1%	38.0%
Agree	Count	19	4	10	33
	% within G	42.2%	20.0%	71.4%	41.8%
Strongly Agree	Count	4	0	1	5
	% within G	8.9%	0.0%	7.1%	6.3%
Total	Count	45	20	14	79
	% within G	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests						
	Value	df	Significant	2-sided Sig.	1-sided Sig.	Exact Probability
Pearson Chi-Square	21.536 ^a	8	0.006	0.005		
Likelihood Ratio	23.861	8	0.002	0.003		
Fisher's Exact Test	19.447			0.003		
Linear-by-Linear	.183 ^b	1	0.668	0.686	0.363	0.058
N of Valid Cases	79					

a. 9 cells (60.0%) have expected count less than 5. The minimum expected count is .428.
b. The standardized statistic is -.428.

Fisher's Exact Test 19.447 0.003

4. RISK CONTROL

4.1 Awareness of controlling operational risk

Crosstab					
		Group			Total
		Staff	Students	Managemer	
Awareness: Strongly Disagree	Count	1	1	0	2
	% within Group	2,2%	5,0%	0,0%	2,5%
Disagree	Count	1	3	3	7
	% within Group	2,2%	15,0%	21,4%	8,9%
Unsure	Count	21	12	0	33
	% within Group	46,7%	60,0%	0,0%	41,8%
Agree	Count	19	4	10	33
	% within Group	42,2%	20,0%	71,4%	41,8%
Strongly Agree	Count	3	0	1	4
	% within Group	6,7%	0,0%	7,1%	5,1%
Total	Count	45	20	14	79
	% within Group	100,0%	100,0%	100,0%	100,0%

Chi-Square Tests					
	Value	df	Significant	2-sided Sig.	1-sided Probability
Pearson Chi-Square	20,714 ^a	8	0,008	0,007	
Likelihood Ratio	27,719	8	0,001	0,000	
Fisher's Exact Test	23,667			0,000	
Linear-by-Linear Association	,048 ^b	1	0,827	0,860	0,446
N of Valid Cases	79				

a. 9 cells (60,0%) have expected count less than 5. The minimum expected count is 1,000.

b. The standardized statistic is -.218.

Fisher's Exact Test 23.667 0.000

4.2 Risk control measures are in place to manage risks

Crosstab					
		Group			Total
		Staff	Students	Managemer	
Risk control: Strongly Disagree	Count	0	1	0	1
	% within Group	0,0%	5,0%	0,0%	1,3%
Disagree	Count	2	5	4	11
	% within Group	4,4%	25,0%	28,6%	13,9%
Unsure	Count	20	6	1	27
	% within Group	44,4%	30,0%	7,1%	34,2%
Agree	Count	21	6	8	35
	% within Group	46,7%	30,0%	57,1%	44,3%
Strongly Agree	Count	2	2	1	5
	% within Group	4,4%	10,0%	7,1%	6,3%
Total	Count	45	20	14	79
	% within Group	100,0%	100,0%	100,0%	100,0%

Chi-Square Tests					
	Value	df	Significant	2-sided Sig.	1-sided Probability
Pearson Chi-Square	16,452 ^a	8	0,036	0,027	
Likelihood Ratio	17,828	8	0,023	0,023	
Fisher's Exact Test	17,348			0,009	
Linear-by-Linear Association	,576 ^b	1	0,448	0,497	0,251
N of Valid Cases	79				

a. 9 cells (60,0%) have expected count less than 5. The minimum expected count is 1,000.

b. The standardized statistic is -.759.

Fisher's Exact Test 17.348 0.009

4.3 Action plans exist to mitigate or eliminate risks

Crosstab					
		Group			Total
		Staff	Students	Managemer	
Action plan Strongly Disagree	Count	0	0	1	1
	% within Group	0,0%	0,0%	7,1%	1,3%
Disagree	Count	1	4	3	8
	% within Group	2,2%	20,0%	21,4%	10,1%
Unsure	Count	25	9	3	37
	% within Group	55,6%	45,0%	21,4%	46,8%
Agree	Count	17	6	5	28
	% within Group	37,8%	30,0%	35,7%	35,4%
Strongly Agree	Count	2	1	2	5
	% within Group	4,4%	5,0%	14,3%	6,3%
Total	Count	45	20	14	79
	% within Group	100,0%	100,0%	100,0%	100,0%

Chi-Square Tests						
	Value	df	Significant	2-sided Sig.	1-sided Sig.	Probability
Pearson Chi-Square	15,730 ^a	8	0,046	0,036		
Likelihood Ratio	15,111	8	0,057	0,062		
Fisher's Exact Test	15,145			0,023		
Linear-by-Linear Association	1,836 ^b	1	0,361	0,366	0,207	0,048
N of Valid Cases	79					

a. 10 cells (66,7%) have expected count less than 5. The minimum expected count is .914.
b. The standardized statistic is -.914.

Fisher's Exact Test 15.145 0.023

4.4 Risk financing has been considered as part the budget process

Crosstab					
		Group			Total
		Staff	Students	Managemer	
Risk financ Strongly Disagree	Count	1	4	0	5
	% within Group	2,2%	20,0%	0,0%	6,3%
Disagree	Count	1	1	3	5
	% within Group	2,2%	5,0%	21,4%	6,3%
Unsure	Count	26	13	5	44
	% within Group	57,8%	65,0%	35,7%	55,7%
Agree	Count	17	2	6	25
	% within Group	37,8%	10,0%	42,9%	31,6%
Total	Count	45	20	14	79
	% within Group	100,0%	100,0%	100,0%	100,0%

Chi-Square Tests						
	Value	df	Significant	2-sided Sig.	1-sided Sig.	Probability
Pearson Chi-Square	19,691 ^a	6	0,003	0,003		
Likelihood Ratio	18,398	6	0,005	0,007		
Fisher's Exact Test	16,455			0,004		
Linear-by-Linear Association	1,711 ^b	1	0,191	0,198	0,115	0,031
N of Valid Cases	79					

a. 7 cells (58,3%) have expected count less than 5. The minimum expected count is .914.
b. The standardized statistic is -1.308.

Fisher's Exact Test 16.455 0.004

4.5 Risk controls are monitored and reviewed for effectiveness

Crosstab					
		Group			Total
		Staff	Students	Management	
Risk controls Strongly Disagree	Count	0	2	1	3
	% within Group	0,0%	10,0%	7,1%	3,8%
Disagree	Count	1	7	1	9
	% within Group	2,2%	35,0%	7,1%	11,4%
Unsure	Count	27	10	2	39
	% within Group	60,0%	50,0%	14,3%	49,4%
Agree	Count	15	1	9	25
	% within Group	33,3%	5,0%	64,3%	31,6%
Strongly Agree	Count	2	0	1	3
	% within Group	4,4%	0,0%	7,1%	3,8%
Total	Count	45	20	14	79
	% within Group	100,0%	100,0%	100,0%	100,0%

Chi-Square Tests					
	Value	df	Significance	2-sided Sig.	1-sided Probability
Pearson Chi-Square	32,460 ^a	8	0,000	0,000	
Likelihood Ratio	34,994	8	0,000	0,000	
Fisher's Exact Test	31,324			0,000	
Linear-by-Linear Association	421 ^b	1	0,516	0,545	0,287
N of Valid Cases	79				

a. 9 cells (60,0%) have expected count less than 5. The minimum expected count is 1,000.

b. The standardized statistic is -.649.

Fisher's Exact Test 31.324 0.000

4.6 Presence of oversight structures to control risks

Crosstab					
		Group			Total
		Staff	Students	Management	
Presence Strongly Disagree	Count	0	1	0	1
	% within Group	0,0%	5,0%	0,0%	1,3%
Disagree	Count	1	4	3	8
	% within Group	2,2%	20,0%	21,4%	10,1%
Unsure	Count	24	11	3	38
	% within Group	53,3%	55,0%	21,4%	48,1%
Agree	Count	18	4	8	30
	% within Group	40,0%	20,0%	57,1%	38,0%
Strongly Agree	Count	2	0	0	2
	% within Group	4,4%	0,0%	0,0%	2,5%
Total	Count	45	20	14	79
	% within Group	100,0%	100,0%	100,0%	100,0%

Chi-Square Tests					
	Value	df	Significance	2-sided Sig.	1-sided Probability
Pearson Chi-Square	16,558 ^a	8	0,035	0,026	
Likelihood Ratio	18,240	8	0,020	0,014	
Fisher's Exact Test	16,353			0,011	
Linear-by-Linear Association	1,689 ^b	1	0,194	0,202	0,116
N of Valid Cases	79				

a. 9 cells (60,0%) have expected count less than 5. The minimum expected count is 1,000.

b. The standardized statistic is -1,300.

Fisher's Exact Test 16.353 0.011

5. RISK MONITORING

5.1 College structures are in place to monitor risks

Crosstab						
		Group			Total	
		Staff	Students	Management		
College str	Strongly Dis	Count	0	1	0	1
		% within Gr	0.0%	5.0%	0.0%	1.3%
Disagree	Count	2	3	2	7	
		% within Gr	4.4%	15.0%	14.3%	8.9%
Unsure	Count	20	13	2	35	
		% within Gr	44.4%	65.0%	14.3%	44.3%
Agree	Count	20	3	9	32	
		% within Gr	44.4%	15.0%	64.3%	40.5%
Strongly Ag	Count	3	0	1	4	
		% within Gr	6.7%	0.0%	7.1%	5.1%
Total	Count	45	20	14	79	
		% within Gr	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests						
	Value	df	Significance	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Probability
Pearson Chi-Square	16.737 ^a	8	0.033	0.025		
Likelihood Ratio	19.026	8	0.015	0.013		
Fisher's Exact Test	17.443			0.007		
Linear-by-Linear	.286 ^b	1	0.593	0.640	0.330	0.064
N of Valid Cases	79					

a. 9 cells (60.0%) have expected count less than 5. The minimum expected count is .

b. The standardized statistic is -.535.

Fisher's Exact Test 17.443 0.007

5.2 Received capacity building on risk monitoring

Crosstab						
		Group			Total	
		Staff	Students	Management		
Received ca	Strongly Dis	Count	1	1	0	2
		% within Gr	2.2%	5.0%	0.0%	2.5%
Disagree	Count	4	4	6	14	
		% within Gr	8.9%	20.0%	42.9%	17.7%
Unsure	Count	21	14	3	38	
		% within Gr	46.7%	70.0%	21.4%	48.1%
Agree	Count	18	1	5	24	
		% within Gr	40.0%	5.0%	35.7%	30.4%
Strongly Ag	Count	1	0	0	1	
		% within Gr	2.2%	0.0%	0.0%	1.3%
Total	Count	45	20	14	79	
		% within Gr	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests						
	Value	df	Significance	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Probability
Pearson Chi-Square	18.466 ^a	8	0.018	0.012		
Likelihood Ratio	20.566	8	0.008	0.006		
Fisher's Exact Test	19.377			0.003		
Linear-by-Linear	4.763 ^b	1	0.029	0.033	0.019	0.007
N of Valid Cases	79					

a. 9 cells (60.0%) have expected count less than 5. The minimum expected count is .

b. The standardized statistic is -2.182.

Fisher's Exact Test 19.377 0.003

5.3 Awareness of measurement of operational risks

Crosstab					
		Group			Total
		Staff	Students	Managemer	
Awareness: Strongly Disagree	Count	1	2	0	3
	% within Group	2.2%	10.0%	0.0%	3.8%
Disagree	Count	2	4	2	8
	% within Group	4.4%	20.0%	14.3%	10.1%
Unsure	Count	19	10	5	34
	% within Group	42.2%	50.0%	35.7%	43.0%
Agree	Count	23	3	7	33
	% within Group	51.1%	15.0%	50.0%	41.8%
Strongly Agree	Count	0	1	0	1
	% within Group	0.0%	5.0%	0.0%	1.3%
Total	Count	45	20	14	79
	% within Group	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests						
	Value	df	Significant	2-sided Sig.	1-sided Sig.	Probability
Pearson Chi-Square	14.406 ^a	8	0.072	0.058		
Likelihood Ratio	15.136	8	0.057	0.056		
Fisher's Exact Test	14.345			0.030		
Linear-by-Linear Association	1.074 ^b	1	0.300	0.325	0.173	0.041
N of Valid Cases	79					

a. 9 cells (60.0%) have expected count less than 5. The minimum expected count is .500.

b. The standardized statistic is -1.037.

Fisher's Exact Test 14.345 0.030

5.4 Awareness of risk monitoring

Crosstab					
		Group			Total
		Staff	Students	Managemer	
Awareness: Strongly Disagree	Count	1	1	0	2
	% within Group	2.2%	5.0%	0.0%	2.5%
Disagree	Count	2	7	3	12
	% within Group	4.4%	35.0%	21.4%	15.2%
Unsure	Count	19	8	1	28
	% within Group	42.2%	40.0%	7.1%	35.4%
Agree	Count	21	3	10	34
	% within Group	46.7%	15.0%	71.4%	43.0%
Strongly Agree	Count	2	1	0	3
	% within Group	4.4%	5.0%	0.0%	3.8%
Total	Count	45	20	14	79
	% within Group	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests						
	Value	df	Significant	2-sided Sig.	1-sided Sig.	Probability
Pearson Chi-Square	20.734 ^a	8	0.008	0.007		
Likelihood Ratio	23.705	8	0.003	0.002		
Fisher's Exact Test	21.676			0.001		
Linear-by-Linear Association	.596 ^b	1	0.440	0.452	0.246	0.049
N of Valid Cases	79					

a. 9 cells (60.0%) have expected count less than 5. The minimum expected count is .500.

b. The standardized statistic is -.772.

Fisher's Exact Test 21.676 0.001

5.5 Ability to identify new risks through risk monitoring

Crosstab						
		Group			Total	
		Staff	Students	Management		
Ability to identify new risks through risk monitoring	Strongly Disagree	Count	1	2	0	3
		% within Group	2.2%	10.0%	0.0%	3.8%
Disagree	Count	2	5	3	10	
	% within Group	4.4%	25.0%	21.4%	12.7%	
Unsure	Count	21	10	2	33	
	% within Group	46.7%	50.0%	14.3%	41.8%	
Agree	Count	18	2	8	28	
	% within Group	40.0%	10.0%	57.1%	35.4%	
Strongly Agree	Count	3	1	1	5	
	% within Group	6.7%	5.0%	7.1%	6.3%	
Total	Count	45	20	14	79	
	% within Group	100.0%	100.0%	100.0%	100.0%	

Chi-Square Tests						
	Value	df	Significance	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Asymptotic Significance (1-sided)
Pearson Chi-Square	17.477 ^a	8	0.026	0.024		
Likelihood Ratio	19.554	8	0.012	0.017		
Fisher's Exact Test	18.306			0.006		
Linear-by-Linear	.497 ^b	1	0.481	0.521	0.267	0.050
N of Valid Cases	79					

a. 9 cells (60.0%) have expected count less than 5. The minimum expected count is .500.

b. The standardized statistic is -.705.

Fisher's Exact Test 18.306 0.006

5.6 Risk monitoring has enabled proactive college management

Crosstab						
		Group			Total	
		Staff	Students	Management		
Risk monitoring has enabled proactive college management	Strongly Disagree	Count	0	1	0	1
		% within Group	0.0%	5.0%	0.0%	1.3%
Disagree	Count	2	6	4	12	
	% within Group	4.4%	30.0%	28.6%	15.2%	
Unsure	Count	22	12	3	37	
	% within Group	48.9%	60.0%	21.4%	46.8%	
Agree	Count	19	1	6	26	
	% within Group	42.2%	5.0%	42.9%	32.9%	
Strongly Agree	Count	2	0	1	3	
	% within Group	4.4%	0.0%	7.1%	3.8%	
Total	Count	45	20	14	79	
	% within Group	100.0%	100.0%	100.0%	100.0%	

Chi-Square Tests						
	Value	df	Significance	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Asymptotic Significance (1-sided)
Pearson Chi-Square	21.181 ^a	8	0.007	0.004		
Likelihood Ratio	24.954	8	0.002	0.001		
Fisher's Exact Test	22.962			0.001		
Linear-by-Linear	3.295 ^b	1	0.069	0.082	0.043	0.014
N of Valid Cases	79					

a. 9 cells (60.0%) have expected count less than 5. The minimum expected count is .500.

b. The standardized statistic is -1.815.

Fisher's Exact Test 22.962 0.001

6. RISK REPORTING

6.1 Presence of risk reporting mechanisms to track risk management progress

Crosstab					
		Group			Total
		Staff	Students	Managemer	
Presence (Strongly Di	Count	0	1	1	2
	% within G	0.0%	5.0%	7.1%	2.5%
Disagree	Count	0	3	2	5
	% within G	0.0%	15.0%	14.3%	6.3%
Unsure	Count	24	15	6	45
	% within G	53.3%	75.0%	42.9%	57.0%
Agree	Count	20	1	5	26
	% within G	44.4%	5.0%	35.7%	32.9%
Strongly Ag	Count	1	0	0	1
	% within G	2.2%	0.0%	0.0%	1.3%
Total	Count	45	20	14	79
	% within G	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests						
	Value	df	Significant	ct Sig. (2-si	ct Sig. (1-si	int Probability
Pearson C	18.498 ^a	8	0.018	0.012		
Likelihood	23.740	8	0.003	0.001		
Fisher's Ex	21.259			0.001		
Linear-by-L	7.950 ^b	1	0.005	0.004	0.003	0.002
N of Valid C	79					

a. 10 cells (66.7%) have expected count less than 5. The minimum expected co
b. The standardized statistic is -2.820.

Fisher's Exact Test 21.259 0.001

6.2 Evidence of regular risk reporting from management

Crosstab					
		Group			Total
		Staff	Students	Managemen	
Evidence of Strongly Dis	Count	1	3	1	5
	% within Gr	2.2%	15.0%	7.1%	6.3%
Disagree	Count	1	4	3	8
	% within Gr	2.2%	20.0%	21.4%	10.1%
Unsure	Count	26	9	4	39
	% within Gr	57.8%	45.0%	28.6%	49.4%
Agree	Count	16	4	6	26
	% within Gr	35.6%	20.0%	42.9%	32.9%
Strongly Ag	Count	1	0	0	1
	% within Gr	2.2%	0.0%	0.0%	1.3%
Total	Count	45	20	14	79
	% within Gr	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests						
	Value	df	Significant	ct Sig. (2-si	ct Sig. (1-si	int Probability
Pearson Ch	14.291 ^a	8	0.074	0.061		
Likelihood R	15.155	8	0.056	0.061		
Fisher's Ex	15.057			0.024		
Linear-by-L	2.980 ^b	1	0.084	0.087	0.052	0.016
N of Valid C	79					

a. 10 cells (66.7%) have expected count less than 5. The minimum expected count is
b. The standardized statistic is -1.726.

Fisher's Exact Test 15.057 0.024

6.3 Discussions in meetings of risks from the risk report

Crosstab					
		Group			Total
		Staff	Students	Management	
Discussion: Strongly Disagree	Count	1	1	1	3
	% within Group	2.2%	5.0%	7.1%	3.8%
Disagree	Count	5	8	2	15
	% within Group	11.1%	40.0%	14.3%	19.0%
Unsure	Count	20	8	2	30
	% within Group	44.4%	40.0%	14.3%	38.0%
Agree	Count	18	3	9	30
	% within Group	40.0%	15.0%	64.3%	38.0%
Strongly Agree	Count	1	0	0	1
	% within Group	2.2%	0.0%	0.0%	1.3%
Total	Count	45	20	14	79
	% within Group	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests						
	Value	df	Significance	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Probability
Pearson Chi-Square	15.790 ^a	8	0.045	0.035		
Likelihood Ratio	16.279	8	0.039	0.037		
Fisher's Exact Test	16.166			0.015		
Linear-by-Linear	.380 ^b	1	0.538	0.561	0.296	0.054
N of Valid Cases	79					

a. 8 cells (53.3%) have expected count less than 5. The minimum expected count is .

b. The standardized statistic is -.616.

Fisher's Exact Test 16.166 0.015

6.4 Evidence of a format for risk reporting

Crosstab					
		Group			Total
		Staff	Students	Management	
Evidence of Strongly Disagree	Count	1	1	0	2
	% within Group	2.2%	5.0%	0.0%	2.5%
Disagree	Count	1	6	5	12
	% within Group	2.2%	30.0%	35.7%	15.2%
Unsure	Count	23	11	4	38
	% within Group	51.1%	55.0%	28.6%	48.1%
Agree	Count	19	1	5	25
	% within Group	42.2%	5.0%	35.7%	31.6%
Strongly Agree	Count	1	1	0	2
	% within Group	2.2%	5.0%	0.0%	2.5%
Total	Count	45	20	14	79
	% within Group	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests						
	Value	df	Significance	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Probability
Pearson Chi-Square	21.002 ^a	8	0.007	0.005		
Likelihood Ratio	25.122	8	0.001	0.001		
Fisher's Exact Test	23.400			0.000		
Linear-by-Linear	5.448 ^b	1	0.020	0.023	0.012	0.005
N of Valid Cases	79					

a. 9 cells (60.0%) have expected count less than 5. The minimum expected count is .

b. The standardized statistic is -2.334.

Fisher's Exact Test 23.400 0.000

6.5 Awareness of risk management progress

Crosstab					
		Group			Total
		Staff	Students	Management	
Awareness Strongly Disagree	Count	1	0	0	1
	% within Group	2.2%	0.0%	0.0%	1.3%
Disagree	Count	1	6	3	10
	% within Group	2.2%	30.0%	21.4%	12.7%
Unsure	Count	23	14	5	42
	% within Group	51.1%	70.0%	35.7%	53.2%
Agree	Count	19	0	6	25
	% within Group	42.2%	0.0%	42.9%	31.6%
Strongly Agree	Count	1	0	0	1
	% within Group	2.2%	0.0%	0.0%	1.3%
Total	Count	45	20	14	79
	% within Group	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests						
	Value	df	Significance	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Asymptotic Significance (1-sided)
Pearson Chi-Square	21.365 ^a	8	0.006	0.002		
Likelihood Ratio	28.794	8	0.000	0.000		
Fisher's Exact Test	25.457			0.000		
Linear-by-Linear	3.445 ^b	1	0.063	0.067	0.040	0.015
N of Valid Cases	79					

a. 9 cells (60.0%) have expected count less than 5. The minimum expected count is .

b. The standardized statistic is -1.856.

Fisher's Exact Test 25.457 0.000

8.10 Annexure H: Survey Correlations

Annexure H: Staff Correlations

Spearman's rho	An operational environment scan was done before the identification of risks	College has a risk management policy	College has a risk management procedures	Presence of an organizational structure for responsible management	College has clear roles and responsibilities for risk management	Student representatives were part of risk identification development	Risk identification method, e.g. a workshop, considered in identifying risks	Strategic and operational environments were considered in identification process	Risks were profiled according to frequency impact	Identified risks were quantified and rated	Risk control measures are in place to manage risks	Action plans exist to mitigate or eliminate risks	Risk controls are monitored and reviewed for effectiveness	College structures are in place to monitor risks	Awareness of risk monitoring	Presence of risk reporting mechanisms to track risk management progress	Evidence of risk reporting from management	Awareness of risk management progress
1.000	0.000	0.021	0.344	0.338	0.301	0.241	0.316	0.472	0.603	0.612	0.413	0.464	0.555	0.462	0.559	0.486	0.478	
0.45	0.000	0.023	0.45	0.45	0.45	0.110	0.024	0.001	0.000	0.000	0.005	0.001	0.000	0.000	0.001	0.001	0.001	
0.527	1.000	0.845	0.707	0.591	0.453	0.453	0.389	0.553	0.512	0.448	0.595	0.598	0.489	0.719	0.562	0.590	0.514	0.530
0.45	0.000	0.020	0.45	0.45	0.45	0.020	0.016	0.000	0.000	0.002	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000
0.344	0.845	1.000	0.764	0.618	0.453	0.453	0.317	0.591	0.453	0.398	0.598	0.511	0.393	0.644	0.598	0.604	0.463	0.553
0.021	0.000	0.000	0.000	0.000	0.000	0.003	0.037	0.001	0.001	0.008	0.000	0.000	0.008	0.000	0.000	0.001	0.000	0.000
0.45	0.000	0.000	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45
0.338	0.707	0.764	1.000	0.706	0.453	0.453	0.395	0.538	0.483	0.370	0.527	0.497	0.613	0.770	0.597	0.610	0.466	0.485
0.023	0.000	0.000	0.000	0.000	0.000	0.000	0.007	0.000	0.001	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001
0.301	0.591	0.618	0.706	0.595	0.421	0.421	0.334	0.704	0.565	0.407	0.607	0.544	0.509	0.617	0.519	0.554	0.385	0.457
0.044	0.000	0.000	0.000	0.000	0.004	0.004	0.025	0.000	0.000	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.009	0.002
0.241	0.453	0.429	0.681	0.421	0.453	0.453	0.384	0.533	0.502	0.423	0.409	0.454	0.454	0.454	0.454	0.454	0.454	0.454
0.110	0.002	0.003	0.000	0.004	0.000	0.000	0.009	0.000	0.000	0.004	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.45	0.000	0.000	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45
0.316	0.598	0.312	0.395	0.334	0.384	0.384	0.100	0.569	0.448	0.295	0.324	0.277	0.439	0.501	0.625	0.513	0.407	0.559
0.034	0.016	0.037	0.007	0.025	0.009	0.009	0.018	0.000	0.000	0.018	0.030	0.066	0.003	0.000	0.000	0.000	0.006	0.000
0.45	0.000	0.000	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45
0.553	0.591	0.638	0.704	0.598	0.453	0.453	0.384	0.568	0.448	0.295	0.324	0.277	0.439	0.501	0.625	0.513	0.407	0.559
0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.45	0.000	0.000	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45
0.603	0.612	0.413	0.464	0.555	0.464	0.555	0.464	0.555	0.464	0.555	0.464	0.555	0.464	0.555	0.464	0.555	0.464	0.555
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.45	0.000	0.000	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45
0.683	0.683	0.683	0.683	0.683	0.683	0.683	0.683	0.683	0.683	0.683	0.683	0.683	0.683	0.683	0.683	0.683	0.683	0.683
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.45	0.000	0.000	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45
0.617	0.617	0.617	0.617	0.617	0.617	0.617	0.617	0.617	0.617	0.617	0.617	0.617	0.617	0.617	0.617	0.617	0.617	0.617
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.45	0.000	0.000	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45
0.413	0.413	0.413	0.413	0.413	0.413	0.413	0.413	0.413	0.413	0.413	0.413	0.413	0.413	0.413	0.413	0.413	0.413	0.413
0.005	0.000	0.000	0.000	0.000	0.000	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.45	0.000	0.000	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45
0.464	0.464	0.464	0.464	0.464	0.464	0.464	0.464	0.464	0.464	0.464	0.464	0.464	0.464	0.464	0.464	0.464	0.464	0.464
0.001	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.45	0.000	0.000	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45
0.555	0.555	0.555	0.555	0.555	0.555	0.555	0.555	0.555	0.555	0.555	0.555	0.555	0.555	0.555	0.555	0.555	0.555	0.555
0.001	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.45	0.000	0.000	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45
0.683	0.683	0.683	0.683	0.683	0.683	0.683	0.683	0.683	0.683	0.683	0.683	0.683	0.683	0.683	0.683	0.683	0.683	0.683
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.45	0.000	0.000	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45
0.468	0.468	0.468	0.468	0.468	0.468	0.468	0.468	0.468	0.468	0.468	0.468	0.468	0.468	0.468	0.468	0.468	0.468	0.468
0.001	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
0.478	0.478	0.478	0.478	0.478	0.478	0.478	0.478	0.478	0.478	0.478	0.478	0.478	0.478	0.478	0.478	0.478	0.478	0.478
0.001	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
0.45	0.000	0.000	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Annexure H: Student Correlations

	An operational environment scan was done before the identification of risks	College has a risk management policy	College has risk management procedures	Presence of organizational risk management structure	College has clear roles and responsibilities for risk management	Student stakeholder representatives were part of risk identification development	Risk identification method, e.g. a workshop, was used to identify risks	Strategic and operational environments were considered in the risk identification process	Risks were profiled according to frequency and impact	Identified risks were quantified and ranked	Risk control measures are in place to manage risks	Action plans exist to mitigate or eliminate risks	Risk controls are monitored and reviewed for effectiveness	Awareness of risk monitoring progress	Presence of risk reporting mechanisms to track risk management progress	Evidence of risk reporting from management	Awareness of risk management progress
Spearman's rho	1.000	0.029	-0.359	-0.073	0.263	0.403	0.310	0.104	0.085	0.139	0.106	0.066	0.165	0.461	0.167	-0.218	
		0.905	0.120	0.761	0.263	0.783	0.183	0.661	0.721	0.559	0.657	0.781	0.484	0.908	0.481	0.355	
			0.008	0.094	-0.130	0.312	0.135	0.403	-0.061	0.080	0.020	-0.069	0.033	-0.202	-0.043	0.246	-0.082
				0.692	0.584	0.180	0.571	0.078	0.797	0.738	0.934	0.708	0.891	0.220	0.868	0.292	0.732
				0.008	0.008	1.000	-0.193	-0.214	-0.131	-0.276	0.470	0.334	-0.058	0.102	-0.049	-0.366	0.003
				0.972	0.640	0.060	0.672	0.414	0.365	0.581	0.240	0.036	0.151	0.809	0.688	0.112	0.989
				0.008	0.008	1.000	-0.428	-0.477	-0.467	-0.159	-0.229	-0.340	0.172	-0.270	-0.375	-0.168	-0.158
				0.692	0.640	0.060	0.672	0.414	0.365	0.581	0.240	0.036	0.151	0.809	0.688	0.112	0.989
				0.008	0.008	1.000	-0.428	-0.477	-0.467	-0.159	-0.229	-0.340	0.172	-0.270	-0.375	-0.168	-0.158
				0.972	0.640	0.060	0.672	0.414	0.365	0.581	0.240	0.036	0.151	0.809	0.688	0.112	0.989
				0.008	0.008	1.000	-0.428	-0.477	-0.467	-0.159	-0.229	-0.340	0.172	-0.270	-0.375	-0.168	-0.158
				0.692	0.640	0.060	0.672	0.414	0.365	0.581	0.240	0.036	0.151	0.809	0.688	0.112	0.989
				0.008	0.008	1.000	-0.428	-0.477	-0.467	-0.159	-0.229	-0.340	0.172	-0.270	-0.375	-0.168	-0.158
				0.972	0.640	0.060	0.672	0.414	0.365	0.581	0.240	0.036	0.151	0.809	0.688	0.112	0.989
				0.008	0.008	1.000	-0.428	-0.477	-0.467	-0.159	-0.229	-0.340	0.172	-0.270	-0.375	-0.168	-0.158
				0.692	0.640	0.060	0.672	0.414	0.365	0.581	0.240	0.036	0.151	0.809	0.688	0.112	0.989
				0.008	0.008	1.000	-0.428	-0.477	-0.467	-0.159	-0.229	-0.340	0.172	-0.270	-0.375	-0.168	-0.158
				0.972	0.640	0.060	0.672	0.414	0.365	0.581	0.240	0.036	0.151	0.809	0.688	0.112	0.989
				0.008	0.008	1.000	-0.428	-0.477	-0.467	-0.159	-0.229	-0.340	0.172	-0.270	-0.375	-0.168	-0.158
				0.692	0.640	0.060	0.672	0.414	0.365	0.581	0.240	0.036	0.151	0.809	0.688	0.112	0.989
				0.008	0.008	1.000	-0.428	-0.477	-0.467	-0.159	-0.229	-0.340	0.172	-0.270	-0.375	-0.168	-0.158
				0.972	0.640	0.060	0.672	0.414	0.365	0.581	0.240	0.036	0.151	0.809	0.688	0.112	0.989
				0.008	0.008	1.000	-0.428	-0.477	-0.467	-0.159	-0.229	-0.340	0.172	-0.270	-0.375	-0.168	-0.158
				0.692	0.640	0.060	0.672	0.414	0.365	0.581	0.240	0.036	0.151	0.809	0.688	0.112	0.989
				0.008	0.008	1.000	-0.428	-0.477	-0.467	-0.159	-0.229	-0.340	0.172	-0.270	-0.375	-0.168	-0.158
				0.972	0.640	0.060	0.672	0.414	0.365	0.581	0.240	0.036	0.151	0.809	0.688	0.112	0.989
				0.008	0.008	1.000	-0.428	-0.477	-0.467	-0.159	-0.229	-0.340	0.172	-0.270	-0.375	-0.168	-0.158
				0.692	0.640	0.060	0.672	0.414	0.365	0.581	0.240	0.036	0.151	0.809	0.688	0.112	0.989
				0.008	0.008	1.000	-0.428	-0.477	-0.467	-0.159	-0.229	-0.340	0.172	-0.270	-0.375	-0.168	-0.158
				0.972	0.640	0.060	0.672	0.414	0.365	0.581	0.240	0.036	0.151	0.809	0.688	0.112	0.989
				0.008	0.008	1.000	-0.428	-0.477	-0.467	-0.159	-0.229	-0.340	0.172	-0.270	-0.375	-0.168	-0.158
				0.692	0.640	0.060	0.672	0.414	0.365	0.581	0.240	0.036	0.151	0.809	0.688	0.112	0.989
				0.008	0.008	1.000	-0.428	-0.477	-0.467	-0.159	-0.229	-0.340	0.172	-0.270	-0.375	-0.168	-0.158
				0.972	0.640	0.060	0.672	0.414	0.365	0.581	0.240	0.036	0.151	0.809	0.688	0.112	0.989
				0.008	0.008	1.000	-0.428	-0.477	-0.467	-0.159	-0.229	-0.340	0.172	-0.270	-0.375	-0.168	-0.158
				0.692	0.640	0.060	0.672	0.414	0.365	0.581	0.240	0.036	0.151	0.809	0.688	0.112	0.989
				0.008	0.008	1.000	-0.428	-0.477	-0.467	-0.159	-0.229	-0.340	0.172	-0.270	-0.375	-0.168	-0.158
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				0.692	0.640	0.060	0.672	0.414	0.365	0.581	0.240	0.036	0.151	0.809	0.688	0.112	0.989
				0.008	0.008	1.000	-0.428	-0.477	-0.467	-0.159	-0.229	-0.340	0.172	-0.270	-0.375	-0.168	-0.158
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				0.008	0.008	1.000	-0.428	-0.477	-0.467	-0.159	-0.229	-0.340	0.172	-0.270	-0.375	-0.168	-0.158
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				0.972	0.640	0.060	0.672	0.414	0.365	0.581	0.240	0.036	0.151	0.809	0.688	0.112	0.989
				0.008	0.008	1.000	-0.428	-0.477	-0.467	-0.159	-0.229	-0.340	0.172	-0.270	-0.375	-0.168	-0.158
				0.692	0.640	0.060	0.672	0.414	0.365	0.581	0.240	0.036	0.151	0.809	0.688	0.112	0.989
				0.008	0.008	1.000	-0.428	-0.477	-0.467	-0.159	-0.229	-0.340	0.172	-0.270	-0.375	-0.168	-0.158
				0.972	0.640	0.060	0.672	0.414	0.365	0.581	0.240	0.036	0.151	0.809	0.688	0.112	0.989
				0.008	0.008	1.000	-0.428	-0.477	-0.467	-0.159	-0.229	-0.340	0.172	-0.270	-0.375	-0.168	-0.158
				0.692	0.640	0.060	0.672	0.414	0.365	0.581	0.240	0.036	0.151	0.809	0.688	0.112	0.989
				0.008	0.008	1.000	-0.428	-0.477	-0.467	-0.159	-0.229	-0.340	0.172	-0.270	-0.375	-0.168	-0.158
				0.972	0.640	0.060	0.672	0.414	0.365	0.581	0.240	0.036	0.151	0.809	0.688	0.112	0.989
				0.008	0.008	1.000	-0.428	-0.477	-0.467	-0.159	-0.229	-0.340	0.172	-0.270	-0.375	-0.168	-0.158
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				0.008	0.008	1.000	-0.428	-0.477	-0.467	-0.159	-0.229	-0.340	0.172	-0.270	-0.375	-0.168	-0.158
				0.972	0.640	0.060	0.672	0.414	0.365	0.581	0.240	0.036	0.151	0.809	0.688	0.112	0.989
				0.008	0.008	1.000	-0.428	-0.477	-0.467	-0.159	-0.229	-0.340	0.172	-0.270	-0.375	-0.168	-0.158
				0.692	0.640	0.060	0.672	0.414	0.365	0.581	0.240	0.036	0.151	0.809	0.688	0.112	0.989
				0.008	0.008	1.000	-0.428	-0.477	-0.467	-0.159	-0.229	-0.340	0.172	-0.270	-0.375	-0.168	-0.158
				0.972	0.640	0.060	0.672	0.414	0.365	0.581	0.240	0.036	0.151	0.809	0.688	0.112	0.989
				0.008	0.008	1.000	-0.428	-0									

Spearman's rho		Annexure II: Management Correlations															
		An operational environment scan was done before the identification of risks	College has a risk management policy	Presence of an organizational structure for risk management	College has clear roles and responsibilities for risk management	Student stakeholder representatives were part of risk identification development	Risk identification workshop was used to identify risks	Strategic and operational environments were considered in the risk identification process	Risks were profiled according to frequency and impact	Identified risks were quantified and rated	Risk control measures are in place to manage risks	Action plans exist to mitigate or eliminate risks	Risk controls are monitored and reviewed for effectiveness	College structures are in place to monitor risks	Awareness of risk monitoring mechanisms to track risk management progress	Evidence of regular risk reporting management	Awareness of risk management progress
Correlation Coefficient	1.000	0.570	0.372	0.418	-0.185	-0.287	0.012	-0.148	-0.176	-0.202	-0.204	-0.025	0.159	0.228	0.305	0.253	0.518
Sig. (2-tailed)		0.033	0.191	0.137	0.527	0.319	0.967	0.613	0.547	0.489	0.485	0.934	0.587	0.433	0.290	0.118	0.058
Correlation Coefficient	0.700	0.630	0.405	0.418	0.145	-0.193	0.272	0.165	0.285	-0.166	0.416	0.485	0.514	0.636	0.732	0.716	0.816
Sig. (2-tailed)		0.033	0.016	0.043	0.620	0.508	0.347	0.574	0.323	0.570	0.139	0.079	0.060	0.014	0.003	0.001	0.004
Correlation Coefficient	0.372	0.630	1.000	0.329	0.197	0.026	0.410	0.486	0.143	-0.300	0.490	0.489	0.596	0.805	0.536	0.384	0.636
Sig. (2-tailed)		0.191	0.016	0.250	0.500	0.929	0.146	0.078	0.625	0.298	0.075	0.076	0.024	0.022	0.047	0.025	0.175
Correlation Coefficient	0.418	0.546	0.329	1.000	0.141	-0.054	0.030	-0.030	0.833	0.352	0.240	0.288	0.275	0.300	0.297	0.444	0.469
Sig. (2-tailed)		0.137	0.043	0.250	0.630	0.855	0.919	0.919	0.010	0.217	0.408	0.319	0.342	0.297	0.302	0.112	0.091
Correlation Coefficient	-0.195	0.145	0.197	0.141	1.000	0.436	0.359	0.537	0.155	-0.180	0.191	0.362	0.243	0.243	-0.041	0.071	0.074
Sig. (2-tailed)		0.527	0.620	0.630	0.630	0.120	0.207	0.048	0.596	0.539	0.513	0.178	0.403	0.402	0.889	0.801	0.813
Correlation Coefficient	-0.287	-0.193	0.026	-0.054	0.436	1.000	0.606	0.006	0.006	-0.127	0.087	0.108	-0.195	0.077	-0.252	-0.484	-0.445
Sig. (2-tailed)		0.319	0.508	0.929	0.855	0.120	0.022	0.069	0.992	0.665	0.768	0.712	0.645	0.793	0.384	0.079	0.130
Correlation Coefficient	0.012	0.272	0.410	0.030	0.359	0.606	1.000	0.697	0.104	-0.388	0.395	0.407	0.075	0.545	-0.014	0.018	-0.005
Sig. (2-tailed)		0.967	0.347	0.146	0.919	0.207	0.022	0.006	0.723	0.170	0.174	0.149	0.999	0.044	0.963	0.951	0.952
Correlation Coefficient	-0.148	0.165	0.486	-0.030	0.537	0.500	0.697	1.000	0.155	-0.071	0.217	0.219	0.181	0.161	-0.160	-0.111	-0.089
Sig. (2-tailed)		0.613	0.078	0.919	0.048	0.069	0.006	0.006	0.598	0.610	0.457	0.453	0.537	0.536	0.705	0.705	0.763
Correlation Coefficient	-0.176	0.286	0.143	0.583	0.155	0.006	0.194	0.155	1.000	0.594	0.318	0.157	0.220	0.262	0.150	0.187	0.180
Sig. (2-tailed)		0.547	0.625	0.010	0.396	0.992	0.723	0.390	0.025	0.268	0.952	0.828	0.451	0.395	0.810	0.822	0.536
Correlation Coefficient	-0.702	-0.165	-0.300	0.352	-0.180	-0.177	-0.388	0.071	0.594	1.000	0.227	0.445	0.177	0.474	-0.355	0.189	-0.151
Sig. (2-tailed)		0.469	0.570	0.396	0.217	0.639	0.665	0.170	0.025	0.025	0.434	0.111	0.644	0.097	0.378	0.637	0.653
Correlation Coefficient	-0.204	0.416	0.490	0.240	0.191	0.087	0.395	0.317	0.318	-0.227	1.000	0.848	0.015	0.003	0.044	0.016	0.004
Sig. (2-tailed)		0.485	0.075	0.408	0.513	0.768	0.174	0.457	0.268	0.434	0.000	0.000	0.015	0.003	0.044	0.016	0.004
Correlation Coefficient	-0.025	0.465	0.489	0.268	0.382	0.108	0.407	0.219	0.157	-0.445	0.848	1.000	0.001	0.001	0.143	0.143	0.143
Sig. (2-tailed)		0.934	0.079	0.075	0.319	0.712	0.149	0.463	0.592	0.111	0.000	0.000	0.001	0.001	0.020	0.020	0.006
Correlation Coefficient	0.159	0.514	0.596	0.275	0.243	-0.135	0.075	0.181	0.220	-0.177	0.635	0.766	1.000	0.667	0.456	0.660	0.488
Sig. (2-tailed)		0.060	0.024	0.342	0.403	0.645	0.799	0.537	0.451	0.544	0.015	0.001	0.009	0.009	0.101	0.010	0.018
Correlation Coefficient	0.228	0.636	0.605	0.300	0.243	0.077	0.545	0.181	0.262	-0.474	0.728	0.773	0.667	1.000	0.653	0.657	0.489
Sig. (2-tailed)		0.433	0.014	0.022	0.297	0.402	0.793	0.044	0.365	0.087	0.003	0.001	0.009	0.011	0.011	0.011	0.019
Correlation Coefficient	0.305	0.732	0.538	0.297	-0.041	-0.252	-0.014	-0.180	0.150	-0.255	0.545	0.413	0.456	0.853	1.000	0.765	0.784
Sig. (2-tailed)		0.290	0.003	0.047	0.302	0.889	0.963	0.539	0.610	0.378	0.044	0.143	0.101	0.011	0.001	0.004	0.001
Correlation Coefficient	0.437	0.771	0.593	0.444	0.071	-0.484	0.018	-0.111	0.187	-0.189	0.628	0.611	0.660	0.857	1.000	0.903	0.927
Sig. (2-tailed)		0.118	0.001	0.025	0.112	0.810	0.079	0.951	0.705	0.016	0.016	0.020	0.010	0.011	0.001	0.000	0.000
Correlation Coefficient	0.253	0.716	0.384	0.398	0.074	-0.425	0.018	-0.091	0.160	-0.161	0.721	0.695	0.622	0.817	0.715	0.903	1.000
Sig. (2-tailed)		0.383	0.004	0.175	0.801	0.130	0.952	0.757	0.538	0.583	0.004	0.006	0.018	0.019	0.004	0.000	0.000
Correlation Coefficient	0.518	0.818	0.638	0.469	-0.070	-0.445	-0.005	-0.089	0.102	-0.136	0.518	0.489	0.468	0.889	0.784	0.927	1.000
Sig. (2-tailed)		0.058	0.000	0.014	0.091	0.813	0.111	0.967	0.728	0.644	0.058	0.098	0.077	0.076	0.000	0.000	0.000

*, Correlation is significant at the 0.05 level (2-tailed).
 **, Correlation is significant at the 0.01 level (2-tailed).

8.11 Annexure I: Interview Responses

Interview Responses

This annexure presents a recording of the interviews that were with the College senior management to gather qualitative data. The interviewees are identified by AS, CS and FS.

UNDERSTANDING THE SETTING AND CONTROL ENVIRONMENT

1.1 Was there an organizational scan undertaken? Explain.

AS - “Yes, as part of our internal audit function development of the internal audit plan for the year is preceded by a risk analysis and its well into the internal audit. In other words, internal audits is second here, then there is an evaluation of the risk analysis that was done and a whole risk register is put together with all the institutional management. The environmental scan is done and all the processes are unpacked and analysed in terms of what controls are in place and the like-hood of events happening. It starts with the risk register; even current controls are evaluated.”

CS – “We have had recently a risk management exercise that was done by the external auditors appointed by the college.”

FS – “Yes. Risk assessment is continuous.” Risk assessment was in place before FS came to the college.

1.2 Does the college have a risk management policy?

AS – “Yes we do; it is part of the internal audit policy which is why our internal audit is always preceded by some risks analysis activity whether it is putting together, analysing or reviewing the register.”

CS – “Yes, although it needs to be reviewed.”

FS – Unsure if the policy exists

1.3 Does the college have risk management procedures?

AS – “I think one of them of will be the working in terms of the risk register but to be quite frank, I don’t think that we’ve been handling the risk management activity as a procedure in terms of all the process of the institution. For example, a critical aspect of risk management will be to review and monitor and evaluate whatever activity is taking place. Exams for example, has a review meeting to evaluate to see what is happening which is a critical risk management activity, I don’t think its explicably like this. I know for a fact, for example, that after exams there is a review meeting, after registration there is a review meeting, but they are things that are practiced not necessarily being driven by a procedure.”

CS – “Not 100% compliant on that. Some are procedures that are not in black and white, in other areas in black and white, so I’ll say we are partially compliant in terms of that.”

FS – No

1.4 Does the college have an organizational structure for risk management?

AS – “No...not as an exclusive organization line function.”

CS - No

FS – No

1.5 Are there clear roles and responsibilities to enable the risk management process?

AS – “No, not in terms of accountability and responsibility that will come with delegated line function, it’s sort of a function that will be part of the senior management job.”

CS – “As I’ve said we are partially compliant. We don’t have clear roles at the moment as risk has never been taken as a stand-alone item. It’s an item that is linked to each and every section or functionality of the college and in that area each and every person knows the risks area in her section and they know what’s their responsibility in terms of what is requested.”

FS – No

1.6 Have you as a process owner been trained on risk management?

AS – “Not exactly. No, but going through 10 years of internal audits we work with the risk register, they sort of being an indirect training in regard to that.”

CS - No

FS - No

2. IMPLEMENTATION OF RISK IDENTIFICATION STRATEGIES

2.1 What process was implemented to identify risks?

AS – “The internal audit.”

CS – “Audit processes had been done, so we can identify the compilation of risk register.”

FS – “Two risk workshops were held where risks were identified and attended by college management.”

2.2 What factors informed the risk identification process?

AS – “Firstly, the factors that we took into account was that all cost centre managers will be aware of the inherent risk with regard to the process that they manage, that they are responsible for, so the first process related to was that they were involved in the development of the risk register and therefore the identification of risks.”

CS – “They are both external and internal, it depends what type of risk. Regarding HR, when we are dealing with issues of recruitment, you can have external factors whereby you find people who are applicants of the post that are vacant who come straight to HR and try to influence them to take them in. You can also have a person internally whose corrupt who can start the process in a wrong way, so that’s why I am saying the factors can be external and internal.”

FS – “Difficult to answer. It is subject to the college internal risk-mismanagement. Random discussions and brainstorming sessions.”

2.3 Who were involved in the risk identification development?

AS – “The institutional management.”

AN – “And they will be?”

AS – “Campus managers, unit managers and senior management.”

CS – “Mainly assistant managers from all the sections of the college because as I have said the risks are all over, they were finance people, HR people, general administration people - because they are the experts and they’ll be able to identify and also included the external auditors who are going to assist us. The CEO and the whole senior management team is part of the process, because the senior management must own the process, the council members are governance structure.”

FS – “The whole college management – campus managers, unit managers, deputy directors and director.”

2.4 Which environments were considered in this process?

AS – “All of them in terms of the Quality Management System, we looked at all processes.”

AN – “Was this just internal processes?”

AS – “No, we looked at external processes as well. We looked at, for example the policy and environment which is coming from Department of Higher Education and Training, we looked at the funding environment, once again not only the Department of Higher Education and Training but SETA’s, skills programme and all, we looked at PQM which is a community industry business kind of process because by the recognition that the organization as a system is in packed in a number of ways by external environment issues.”

CS – “We consider as you have said the internal environment, which are all the section areas in organization, governance and environment, our stakeholders which are our students - they also form part of the process. Although we don’t involve all the political people but we have to consider the risks because they are our partners in business or service providers, because even if we develop tools we must make sure that it will be easy for them to compile.”

FS – “Only the internal environment and risk register.”

2.5 What strategy was used in risk identification?

AS – “The risk register format itself for example, the process was identified. For example we were looking at the exams and registrations and then people were asked to identify the particular risk that will be associated with it, we looked at current likely-hood happening, we looked at current controls that we have and basically the entire risks was rated in terms of being really serious where it’s could lead to the shutdown of the institution with the need to be addressed but certainly will not lead the institution in being shut down and based on that we then identify the areas that we will conduct our internal audit to test our controls.”

CS – No response

FS – “Random discussion, brainstorming – no real strategy.”

3. MECHANISMS TO EFFECTIVELY ASSESS RISKS

3.1 Explain the process of how risks were assessed?

AS – “It was again part of the risk register and every single process was looked at and considered in terms of what could go wrong in registration for example, risks that were identified so they were articulated into a form of risk statements.”

CS – “It was accessed on one-on-one visits, interviews to each and every section with the managers and also the employees, we also had the meetings of the IMT and the audit meetings.”

FS – “Collective thinking, brainstorming, prioritizing the risk, people’s point of view.”

3.2 What factors were considered in assessing the risks?

AS - The likelihood of it happening and the organization’s experience was used. We looked at the current controls that were in place and how effective they were.”

CS – “Frequency and severity”

FS – No factors

3.3 What mechanism was used to profile the risks?

AS – “Certainly the one model that we use was the one from the financial audit environment that is used there, but when I use the word financial auditing, I don’t mean it was specific to only to the financial auditing environment. We usually started from scratch with the risk register; we used templates from the financial auditing sector.”

CS – “I’m not sure of the mechanism that was used because it was mainly driven by the finance people.”

FS – No answer

3.4 Did you consider external factors in the risk assessment?

AS – “Yes”

CS – “Yes”

FS – “Not considered.”

3.5 Validate the above.

AS – “You know as a public TVET college we don’t have a choice, because much of our risk is external to the college. Firstly, we are a college that exists on subsidised means and that we are always at financial risk, as a public institution we are bound for example by the broad based black empowerment and the procurement legislation inherent. Once again the college hands is in external environment, our corporate business, our student, our client is from external environment and comes with all kinds of environmental impact to the institution. And in terms of policy, its impact is strongly on the institution and because it is a government institution we are totally embedded in a politic environment and everything that comes with it.”

CS – “As I have said, the political factors, the community we are in. Other risks could also relate to the outside community that we are serving.”

FS – Can’t validate

3.6 Did you consider internal factors in the risk assessment process?

AS – “Yes”

CS – “Yes”

FS – “College is not sophisticated for this.”

3.7 Validate the above

AS – “Internal policies and procedures of the institution, staff competency, capacity, resourcing, infra-structure and management style impacts on an institution.”

CS – “Meetings”

FS – Can’t validate

4. RISK CONTROL STRATEGIES TO MINIMIZE OR ELIMINATE OPERATIONAL RISK

4.1 Name control mechanism to manage risks?

AS – “Firstly it will be a policy and procedures, your quality management system - I think it will be overarching. Secondly, how successfully that is imbedded in the operations of the organization or whether it becomes habit or practice or whether it’s something that you take out or whether the audits come, so overarching, in capital letters will be the quality management system and is lead from the senior management in other words for example is set for others to follow in terms of risk management mitigation all of those things, the policy and procedure and I think also of consequences when these are violated, it’s the culture of discipline.”

CS – “The registers, the review of policies.”

FS – “No control strategies in place, no person or structure.”

4.2 Do you have action plans for the control mechanisms?

AS – “Yes we do, as I have indicated when the risk register is developed and when we identify the areas for the internal audit to go and test the controls. When the internal auditors goes in and carries the internal audit, they will identify critical part for development of the action plan and this action plan indicates what is going to be done and the time frame and who is responsible.”

CS – “Yes”

FS – “Escalate to senior management for risks to be managed, no action plans.”

4.3 Regarding your operational area, what are the financial implications regarding risk control?

AS – “It’s absolutely critical because the core business of the institution is learning and teaching, so the bulk of expenditure takes place here. Because Elangeni has financial functions that are all centralised in other words they have to go through a process that happens at central office there’s a requisition process, approval process by SM before something is placed on order - it gives me a great deal of control on spending for example. All campus’ requisitions come to me to check before they are approved or before they go anywhere, so if I don’t approve something, if I believe it’s not necessary then that requisition goes no further. It is one of the things I insisted that all requisitions within my area come to me and to nobody else even if I’m not at work. I don’t want anything going ahead and then I find I would never approve this because campuses have a tendency to over order.”

CS – “They differ. It depends what we are talking about as there are different financial implications and it depends to the weighting of that particular risk. For instance, in claiming of overtime, it will depend the risk in the amount of overtime if the risk has never been control correctly in terms of claiming the overtime, like we were doing the issue of payment for managers. If we didn’t put the risks in place people can claim the rates that are not correct rates.”

FS – “No real consequence but units need to manage the cash flow. No costs associated to the financial of risks.”

4.4 Are there procedures in place to assist in risk control?

AS – “Yes, there are the policies and the procedures in the quality management system to assist because its outlines how an activity should be taking place and it conceptualises the activities in terms of legislation and so on that impacts on it. But the fact of the matter is that you could have policies and procedures and then you could have policies and how effectively people will have to align to those policies and procedure is one of the tensions that the institution cracks down on a daily bases and its nothing strange to find that the person who’s in charge for a certain area for example, exams would say something like it’s been ages I’ve looked on policies procedures and you’ll find it shocking that cause that should be like your bible cause it’s something you live by every day.”

CS – “Yes, there are.”

FS – “No.”

4.5 What over-sight structures are in place to control risks?

AS – “Internal and external audits obviously, as in terms of the act as amended that is legislative. We also have the internal quality unit that that does the organizational internal audit as part of QMS and the of non-conformance process. I think these are very important parts in terms of identification of preventative measures because it’s critical. And then on governance - also in terms of legislation, our council is by virtue is our supreme structure.”

AN – “How do they play a role there in terms of structure?”

AS – “A council in terms of the mandate in a variety of sub-committees so there is for example the finance and Procurement subcommittee, the HR subcommittee, the I.T Partnership and Infrastructure subcommittee. The critical one is the Audit subcommittee. Another critical part of the audit subcommittee is that the majority of the members are actually independent - they are not members of council.”

CS – “We got supervisors and also segregation of duties, we have people who authorize proof and also have the delegations to exercise powers.”

FS - Nothing

5. RISK MONITORING

5.1 How are your risks measured?

AS – “I think in terms of our internal audit happens throughout the year both from Quality unit as well from our internal audit themselves and external audit take a look the financial functioning and operational functioning of the institution irrespectively for that entire year and then over above that of cause the whole issue about all cost centre management should be implementing monitoring and evaluation and review in terms of all functions including the policies because those should be regularly updated.”

CS – “We are poor in that.”

FS – “High, medium and low risks as derived from the risk formulas in the risk register.”

5.2 As a process owner, do you monitor your risks?

AS – “I do, in terms of my operations, managers for example. I have the campus managers and the curriculum and student support managers who report to me as I have a weekly reports.”

CS – “To a certain extent not that much because of the challenges that we had of unrest this year it has never been easy.”

FS – “Yes, through the cash flow.”

5.3 How are these risks monitored?

AS – “Through the operational managers of the area, weekly reports, conversations, emails or meetings and tracking processes.”

CS – “You monitor it in terms of the performance evaluation that where you monitor it but as I’m saying we not doing well. We also monitor it through sub-commit meetings that we’ve got where we are expected to report.”

FS – “Through assessing the results of cash flow forecasts on a monthly basis - money in and money out.”

5.4 What process is followed to decide on risk acceptability?

AS – “I think the most important thing is the deviation from legislation not just college policy but nationally - that is the most important thing. For example, if someone has purchased something without going through the requisition process.”

CS – No answer

FS – No answer

5.5 How do you deal with risk exposure?

AS – “I would say that as an organization we are very aware of exposure. In most cases, we even have controls in places but I don’t think that we are effective where it matters which is ensuring that those controls are embedded in the organization and that they are practiced.”

CS – “We have to make sure that the policies and compliance are enforced.”

FS – “Depends on the risk – there is no back-up on data and the service provider does back-up on ad-hoc basis.”

6. STRATEGIES TO REPORT ON OPERATIONAL RISK

6.1 Is there a risk reporting mechanism to track risk management progress?

AS – “Yes, risk register and then internal audit action plans that you had to report on, because it tells you what has to be done, when and who. The internal report, risk register and action plan goes to the audit committee. The report deals with reporting from the whole institution that has to be done.”

CS – “Even though, the issue of having the management report to report it is in a way cause we have to report in all the things that are happening in all particular section. No, they don’t come, I think we are poor in terms of risk management that is why last year I needed a qualification audit.”

FS – “Not formal one. Audit sub-committee of college council is monitoring.”

6.2 Is there regular risk reporting from the senior management?

AS – “Yes, to council and as well as to DHET we have to provide quarterly monitoring and evaluation report and our annual performance plan to DHET. There are quarterly financial and monthly reports that go to DHET.”

CS – “It’s not regular; we won’t say it’s regular.”

FS – “No.”

6.3 As a risk owner, are your risks discussed in management meetings?

AS – “It’s discussed at senior management”.

CS – “Yes, they are discussed.”

FS – “Yes at senior management meetings, governance level – not at general management meetings.”

6.4 If so, what is the reporting format?

AS – “It comes from the owner to raise or discuss the risk at the senior management meeting and in institutional management team meetings where the individual managers report their section in the reports as challenges and areas which require urgent support and so on that enables them to report on their risks areas especially where sometimes it seems to go wrong and where they need assistance.”

CS – “It’s a written report.”

FS – “Producing reports.”

6.5 Do other risk owners report on their risk management progress?

AS – “They do and I think other line managers as well because I think it’s the same weekly report format and they all have to fill in those monthly reports that go to DHET. All of those

risks have to be filled in those reports, finance, HR, FETMIS, Curriculum, all of them have targets.”

CS – “Yes, they do.”

FS – “No”

CONCLUDING REMARKS:

AS – “I think one of the critical things that must be taken into consideration is the whole impact that the whole political environment has on TVET institutions. We can be the most sophisticated college with sophisticated quality management system and have every governance and management structure in place and everybody complies, but it’s like a ship sailing on a calm sea - at any moment this tsunami can hit in terms of the political situation and that can de-stabilise and it doesn’t matter what risk management strategy you had and what wonderful procedures you had and policies so on - because politics by nature are very irrational, politics are so inherited to human nature it very difficult to talk about what can be put in into place.”

FS – “College is going through the motions of risk identification and classifying the risk. There is “lip service” to managing risk. No formal structures to manage risk. Risk register is a “dead document”. Used only for compliance purposes. Organization is not focussed on risks therefore is reactive rather than proactive. We are not focussed on managing risk.”

CS – No concluding remarks.