

**AN ASSESSMENT OF INTRAPRENEURSHIP IN PUBLIC
FURTHER EDUCATION AND TRAINING COLLEGES IN THE
FREE STATE PROVINCE.**

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ABSTRACT

The focus of this research study was the assessment of intrapreneurship within public Further Education and Training (FET) Colleges that were earmarked by government to spearhead the alleviation of skills shortages in South Africa. Managers within four colleges in the Free State province of South Africa were selected as the study.

Establishing an intrapreneurial climate within public FET Colleges can play a significant role in improving the effectiveness and efficiency of services rendered, contributing to the long term sustainability of these institutions. Colleges face various challenges including a lack of intrapreneurial spirit and a fragmented approach regarding their visions, missions and strategic thrusts.

The primary objective of the study was to assess the level of intrapreneurship within the four public FET Colleges and to make recommendations on how to improve the level of intrapreneurship within these institutions. A number of secondary objectives were set to support the attainment of the primary objective.

A comprehensive literature study was conducted, which was followed by an empirical study. By means of self-assessment and supervisor assessment, perceptions of managers were tested in relation to entrepreneurial characteristics. Furthermore, relationships were determined between demographic variables and intrapreneurship constructs. Following upon a detailed analysis of data in chapter 4, it was concluded that managers regarded the current intrapreneurial climate at FET Colleges as being average.

Based on the findings of the empirical study and the insight gained during the literature study, recommendations were made on the fostering of intrapreneurship within the colleges. A framework of practical guidelines and an action plan were compiled that could facilitate the process, thereby assisting public FET Colleges in South Africa to

fulfill the vision of the National Department of Education of “...a modern and vibrant nationally co-ordinated FET college system that builds a foundation for lifelong learning and is responsive to the needs of the 21st century”.

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CHAPTER 1

NATURE AND SCOPE OF THE STUDY

1.1 INTRODUCTION

The public sector tends to be bureaucratic by nature with cumbersome decision making channels. Intrapreneurship with concomitant creativity and high rates of responsiveness are not the preferred mode of operation. However, to render an effective service to enable South Africans to become more competitive globally, the public sector would need to rethink its processes and procedures.

Research has been conducted in the public sector regarding intrapreneurship (Zampetakis & Moustakis, 2007; Llewellyn & Jones, 2003; Littunen, 2000; among others). However, as indicated in literature such as the *Global Entrepreneurship Monitor South African Report* (Von Broembsen, Wood & Herrington, 2005: 65) further scientific-based research is still needed. The emphasis should be on the establishment of business models, processes and structures in the public sector in order to increase the level of intrapreneurship in its various departments and sections.

The focus of this research study is on Further Education and Training (FET) Colleges that were earmarked by government to spearhead the alleviation of skills shortages in South Africa. The Further Education and Training Act (16/2006) grants FET Colleges more autonomy to decide on their programme offerings and staff establishments. In short, it is expected of FET Colleges to be managed like business enterprises. As a result, Councils and management teams of public FET Colleges have to put strategies in place to improve responsiveness, the level of intrapreneurship and innovative practices within these institutions.

Establishing intrapreneurial cultures within public FET Colleges can play a significant role in improving the effectiveness and efficiency of services rendered, thus enabling them to fulfil their mandate pertaining skills development in South Africa. At the same time, it would contribute to the long term sustainability of the institutions.

1.2 PROBLEM STATEMENT

Prior to 2001, there were 152 public technical colleges in South Africa. In general terms the image of these colleges among business and industry as well as the community was poor. Perceptions existed that these institutions rendered sub-standard service, were unresponsive to community and business needs and offered programmes that were not market-related.

In terms of the Further Education and Training Act (98/1998) the 152 public technical colleges and the majority of Colleges of Education were merged in 2001 to form 50 public FET Colleges. They were expected to become learning centres that offer high-quality life long learning programmes that would contribute to alleviating the skills shortage in the country.

In order to do so, College Councils and management teams would have to revisit the manner in which business is conducted in the public FET sector. The contemporary business world is one of turbulence and change, offering many opportunities as well as challenges. To be successful in such a volatile environment, a public FET College should be opportunity driven, whilst emphasising innovation and creativity. Intrapreneurial behaviour patterns among management and employees alike should be encouraged and nurtured; thus enabling the institutions to become more competitive and responsive to market needs.

A gap in managerial knowledge currently exists and there is a lack of understanding on how to create a culture of intrapreneurship within public FET Colleges. In order to bridge this gap, this study is conducted among four public FET Colleges in the Free State

province of South Africa. From the findings of the study, a framework of practical guidelines would be developed to facilitate the process of creating and maintaining an entrepreneurial climate within public FET colleges.

1.3 OBJECTIVES OF THE STUDY

1.3.1 Primary Objective

The primary objective of this study is to assess the level of intrapreneurship within four public FET Colleges in the Free State and to make recommendations on the fostering of a climate of intrapreneurship within these institutions.

1.3.2 Secondary objectives

In order to address the primary objective, the following secondary objectives are formulated:

- To define intrapreneurship with special emphasis on the public sector;
- To obtain insight into the dynamics of intrapreneurship in the public sector;
- To determine practically important relationships between ratings of managers on a personal level versus ratings of their supervisors in terms of 30 entrepreneurial characteristics;
- To assess the current intrapreneurial climate within four public FET colleges in terms of 13 constructs of intrapreneurship;
- To examine the relationship between five demographic variables, i.e. age, gender, race, academic qualification, management level and the constructs of intrapreneurship;
- To validate the reliability of the measuring questionnaire;
- To suggest practical recommendations on the fostering of an intrapreneurial climate within public FET Colleges; and

- To develop a framework of guidelines and an action plan that would facilitate the fostering of an intrapreneurial climate within the Colleges.

1.4 SCOPE OF THE STUDY

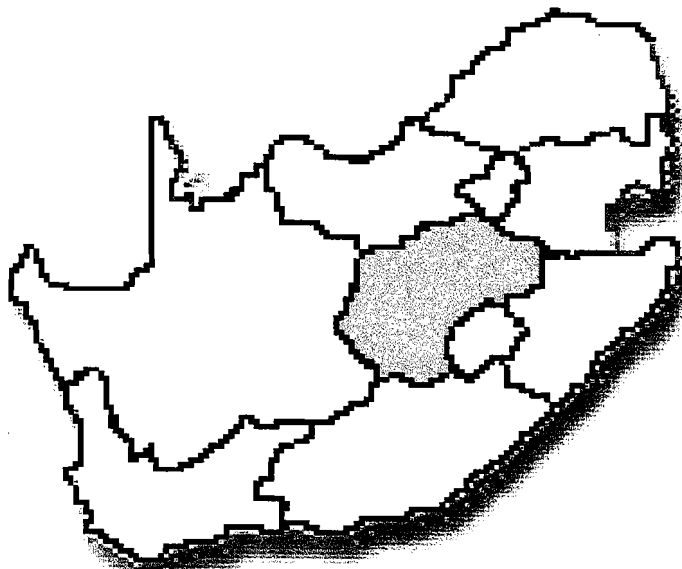
1.4.1 Field and sector of study

The field of study falls within the subject discipline of entrepreneurship with special reference to intrapreneurship.

1.4.2 Geographical demarcation

The study is carried out in the public sector and more specifically the business environment of four public FET Colleges in the Free State province of South Africa. The location of the Free State province within the boundaries of South Africa is indicated in figure 1.1 below.

Figure 1.1 Map of South Africa



Source: Southern African Tourism Association. 2008.

The four colleges are located in regional districts that range from urban to semi-urban and rural. In chapter 2 (paragraph 2.3) more information is provided.

1.5 RESEARCH METHODOLOGY

Many different research steps are distinguished in literature. Nel, Rädell and Loubser (1992: 89) indicate 11 steps, whilst Du Plooy (1995: 34) maintains that eight steps form part of the process. According to Welman, Kruger and Mitchell (2005: 12-13), the research process comprises six steps, namely:

- Determination of the research topic;
- Definition of the research problem;
- Planning the research design;
- Collecting data;
- Analysis and interpretation of data; and
- Writing a report by making conclusions and recommendations.

In this study these six steps as proposed by Welman *et al.* (2005: 12-13) are applied and will be discussed below.

1.5.1 Determination of the research topic

The research topic must contribute in a meaningful way to enhance knowledge in the specific field of study. According to Struwig and Stead (2004: 32), there should be a need for the research; thus it should assist in solving an existing problem by providing the necessary answers. The topic of this study, i.e. the fostering of an intrapreneurial climate within public FET colleges, was selected with this aim in mind.

1.5.2 Definition of the research problem

Nel *et al.* (1992: 89) maintain that the definition of the research problem is the most important step in the research process. An ill-defined problem statement could result in findings that are irrelevant to the actual problem at hand with subsequent waste of time and money. The problem statement for this study is discussed in section 1.2.

1.5.3 Planning the research design

According to Van der Merwe (1998: 7), meticulous planning of the research study would ensure that research objectives are attained. The research design forms a blueprint for the study by outlining procedures for the various research activities (Cooper & Schindler, 2003: 146). Nel *et al.* (1992: 104) argue that the research design comprises decisions on the population and sampling methods, the most suitable data collection methods and data analysis methodology.

1.5.3.1 Population and sampling

- **Survey population**

A survey population consists of a specific group of people from whom data is required (Nel *et al.*, 1992: 266). A population forms the entire group that would be studied and the individuals in the population are called elements (Levine, Stephan, Krehbiel & Berenson, 2006: 2). In this study the survey population is made up of 145 lower, middle and senior managers of four public FET Colleges in the Free State province of South Africa.

The sample frame for this study is a name list provided by Human Resource offices at the four Colleges. The lists comprise names and post levels of all managers at the four public FET Colleges irrespective of whether incumbents are acting or are permanently appointed in posts.

A research study aims to gather information from the population as a whole, but due to cost and time constraints, among others, normally a sample of the total population is selected (Struwig & Stead, 2004: 109). However, due to the small number of subjects in the population of this study, it was decided not to make use of sampling but to include all the subjects in the survey.

1.5.3.2 Methods of data collection

Research data can be categorised into two main types, i.e. primary data and secondary data (Struwig & Stead, 2004: 80). Primary data is gathered for the specific purpose of solving the research problem, while secondary data is existing data that has been collected for purposes other than the specific study at hand (Nel *et al.*, 1992: 121).

- **Factors influencing the choice of data collection method**

The choice of the method to collect data depends on the volume and variety of data required, the level of data objectivity and reliability needed and the cost and duration of the study (Nel *et al.*, 1992: 142). In this study a mail survey is used to collect data by means of a self-completion questionnaire.

The length of the questionnaire determines the volume and variety of data that is collected, whilst the structure and layout of the questionnaire can influence response rates. Reliability of data refers to consistency and stability of data (Struwig & Stead, 2004: 130). Data has internal reliability when repeated measurements under the same conditions give the same results, while external reliability refers to the extent to which independent studies result in the same results in similar circumstances (Swart, P.J. 2005: 8).

Validity of data is concerned with the extent to which the selected scale measures what it is supposed to measure. According to Struwig and Stead (2004: 136), validity refers to the extent to which the research design has been conducted in an acceptable

scientific manner. Two types of validity are distinguished, i.e. internal validity and external validity. Internal validity refers to the accurate interpretation of results whereby independent variables and not extraneous variables, influence the outcome. External validity refers to the extent to which results can be generalised (Struwig & Stead, 2004: 136; Du Plooy, 1995: 31).

- **Questionnaire construction**

Careful consideration should be given to the construction of a questionnaire. Nel *et al.* (1992: 231 – 248) propose guidelines for the compilation of a questionnaire. Question content should be relevant to research objectives. In this study an existing questionnaire designed by Oosthuizen (2006) has been adapted. Refer to Annexure A for an example of the questionnaire which comprises three sections and 111 items:

- Section A consists of 65 items, based on the constructs of intrapreneurship that test the existing level of intrapreneurship within the institution;
- Section B lists 20 entrepreneurial characteristics testing perceptions of managers regarding themselves and their supervisors; and
- Section C makes provision for personal information.

Sections A and B are completed by means of a Likert scale. According to Huysamen (1994: 125), a Likert scale comprises a collection of statements and respondents are required to indicate a degree of agreement/disagreement with statements on for instance a five-point scale. In the questionnaire used in this study, a five-point scale is selected.

No		Strongly Disagree	Slightly Disagree	Neither agree nor disagree	Slightly agree	Strongly Agree
A03	My manager helps me to get my work done by removing obstacles in my way.	1	2	3	4	5

Pre-testing of the adapted questionnaire was done by requesting completion by three respondents prior to general distribution. Based on their recommendations, necessary corrections were made.

1.5.4 Data collection

Data collection for this study is done in two phases. The first phase comprises the gathering of secondary data by means of a comprehensive literature study. In phase two an empirical study is conducted to gather primary data on the intrapreneurial climate within the four public FET Colleges.

1.5.4.1 The literature study

The goal of the literature study is to gather background information on intrapreneurship and to provide a perspective on the theme. According to Struwig and Stead (2004: 39), a literature study highlights previous investigations into the topic; thus stimulating new ideas.

For the purpose of this study, literature is reviewed with the following objectives in mind:

- To define intrapreneurship with special emphasis on the public sector;
- To highlight variables that influence the public sector environment;
- To investigate entrepreneurial characteristics;
- To determine constructs of intrapreneurship that are necessary to create an entrepreneurial climate within organisations; and
- To review strategies on the fostering of intrapreneurship within an institution.

The constructs of a corporate entrepreneurial climate as identified by Van der Merwe and Oosthuizen (2008: 16-18) are used as benchmarks in the literature study. The constructs are indicated in table 1.1.

Table 1.1 Constructs of intrapreneurship

No	Dimension
1	Inspirational leadership and long-term view
2	Encouragement of new ideas
3	Support by management and champions
4	Tolerance for risks and failure
5	Implementation of new processes
6	Rewarding system
7	Communication and strategy buy-in
8	Discretionary time and volunteer programmes
9	Teamwork
10	Resource availability
11	Continuous cross-functional learning
12	Strong customer orientation
13	Autonomy

Source: Adapted from Van der Merwe and Oosthuizen (2008: 16 – 18)

Categories of literature that are included in the literature study comprise among others, journal articles, books, government publications, internet documents, government publications and dissertations. As far as possible, text by original authors is used. In table 1.2 journals used in the study are pointed out.

Table 1.2 Journals used in the study

Journal
Academy of Management Executive
Australian Journal of Public Administration
California Management Review
Entrepreneurship and Regional Development
Global Journal of Flexible Systems Management
Harvard Business Review
International Journal of Entrepreneurial Behaviour and Research
International Journal of Public Sector Management
Journal of International Business Studies
Journal of Management Research
Journal of Southern African Studies
Leadership & Organization Development Journal
Management Dynamics
Public Administration Review
South African Journal of Business Management
Strategic Management Journal
The Journal for Decision Makers

1.5.4.2 The empirical study

The empirical study consists of a survey among managers at four public FET Colleges located in the Free State province of South Africa, by means of a self-completion questionnaire.

- **Conducting the survey**

Personalised cover letters that explain the reasons for the study and a copy of the questionnaire are sent to respondents with e-mail addresses. Respondents are requested to complete questionnaires either electronically or in hard copy, whichever method would be the most convenient. Upon completion, respondents could return the questionnaires either by e-mail or fax.

At each college a senior manager has been earmarked to render assistance by encouraging employees to complete the questionnaire. Furthermore, to ensure a good response rate, follow-up will be done via e-mail to remind respondents.

1.5.5 Analysis and interpretation of data

When data has been collected, the next step is to analyse and interpret the data. From the findings of the analysis, the researcher would draw conclusions and make recommendations.

1.5.5.1 Data preparation and tabulation

Data preparation and tabulation are important activities in the data analysis process. Data preparation consists of the editing of questionnaires by scrutinising these for among others, completeness and consistency. Struwig and Stead (2004: 150) maintain that editing of raw data would enable the researcher to eliminate errors regarding consistency. Tabulation of data involves putting data into meaningful categories from

which deductions can be made. In this study incomplete questionnaires would either be discarded in totality or partly, depending on the number of items not completed.

- **Frequency distribution**

In a frequency distribution data is arranged into mutually exclusive categories which are numerically ordered and indicate the spread of data (Levine *et al.*, 2006: 55). In this study frequency distributions would be portrayed graphically with the aid of histograms and bar charts. Percentages as well as numbers would be used, depending on the nature of data, to draft the frequency distributions.

- **Measures of central tendency**

Measures of central tendency indicate the clustering of data around a central point (Levine *et al.*, 2006: 105). Measures of central tendency include the mean, the median and the mode. In this study the mean would be used to analyse data.

- **Measures of dispersion**

Measures of dispersion indicate the spread in data (Levine *et al.*, 2006: 112). Five measures of dispersion are identified, i.e. the range, the interquartile range, the variance, the standard deviation and the coefficient of variation (Levine *et al.*, 2006: 113).

In this study the standard deviation would be used to indicate the dispersion of data around the mean.

- **Internal consistency reliability**

According to Struwig and Stead (2004: 132), the internal consistency index indicates the average correlation among items in the research instrument. Cronbach's coefficient alpha is used in this study to determine internal consistency. The higher the value of the Cronbach alpha coefficient, the higher the internal consistency reliability of data and

the more reliable the scale used in the study (Struwig & Stead, 2004: 133). Cronbach alpha coefficient values of 0.7 and higher are regarded as acceptable levels of reliability (Van der Merwe & Ellis, 2007:30).

- **Correlation techniques**

The coefficient of correlation (ρ) measures the strength of a relationship between two variables. Correlation values range from perfect negative (-1) to perfect positive (+1) (Levine *et al.*, 2006: 138). In this study the Spearman correlation coefficient is used to indicate correlation relationships between variables.

- **Practical significance versus statistical significance**

Research results can be statistical significant, i.e. not due to chance factors, but have a trivial practical significance. Ellis and Steyn (2003: 2) define practical significance as being a large enough difference to have an effect in practice. The authors put forward a measure called “effect size” (Ellis & Steyn, 2003: 2) which is independent of sample size and units. Furthermore, the measure indicates the spread of data. In table 1.3 guidelines given by Cohen (1988: 20 – 27) regarding the interpretation of effect sizes for means are indicated.

Table 1.3 Interpretation of effect sizes for means

Effect size (d)	Interpretation
d = 0.2	Small effect
d = 0.5	Medium effect; indicating a visible relationship
d = 0.8	Large effect; a large possibility exists for practical significance

Source: Adapted from Ellis and Steyn (2003: 4)

In this study the Statistical Consultation Services of the North-West University (Potchefstroom campus) would be commissioned to analyse the collected data.

1.6 LIMITATIONS OF THE STUDY

The study attempts to make a contribution to the existing knowledge on intrapreneurship within the public sector. However, the following limitations regarding the study are put forward:

- As the scope of the study is limited to lower, middle and senior management at public FET Colleges, staff members such as educators on post level one and support staff are excluded. Interpretation of results should therefore be done with care and study findings cannot be generalised to the entire FET College staff fraternity. It is furthermore recommended that the opinions of post level one educators and administrative staff members should be included in future studies on this topic.
- Only Free State Colleges are included in the survey, resulting in a small sample that could limit the extent to which the findings of the study can be generalised to the public FET sector in South Africa.
- The study is confined to the analysis of 13 constructs of intrapreneurship behaviour. Other dimensions that are prevalent in the public sector may influence intrapreneurial behaviour within a public FET College, for example the level of bureaucracy that exists in the public sector and legislative control measures impacting on colleges.

1.7 LAYOUT OF THE STUDY

Figure 1.2 depicts the layout of the study per chapter.

In chapter 2 an exposition of the general business environment of public FET Colleges is given, focusing on the Free State colleges. A profile will be compiled that indicates the sector-specific challenges and opportunities.

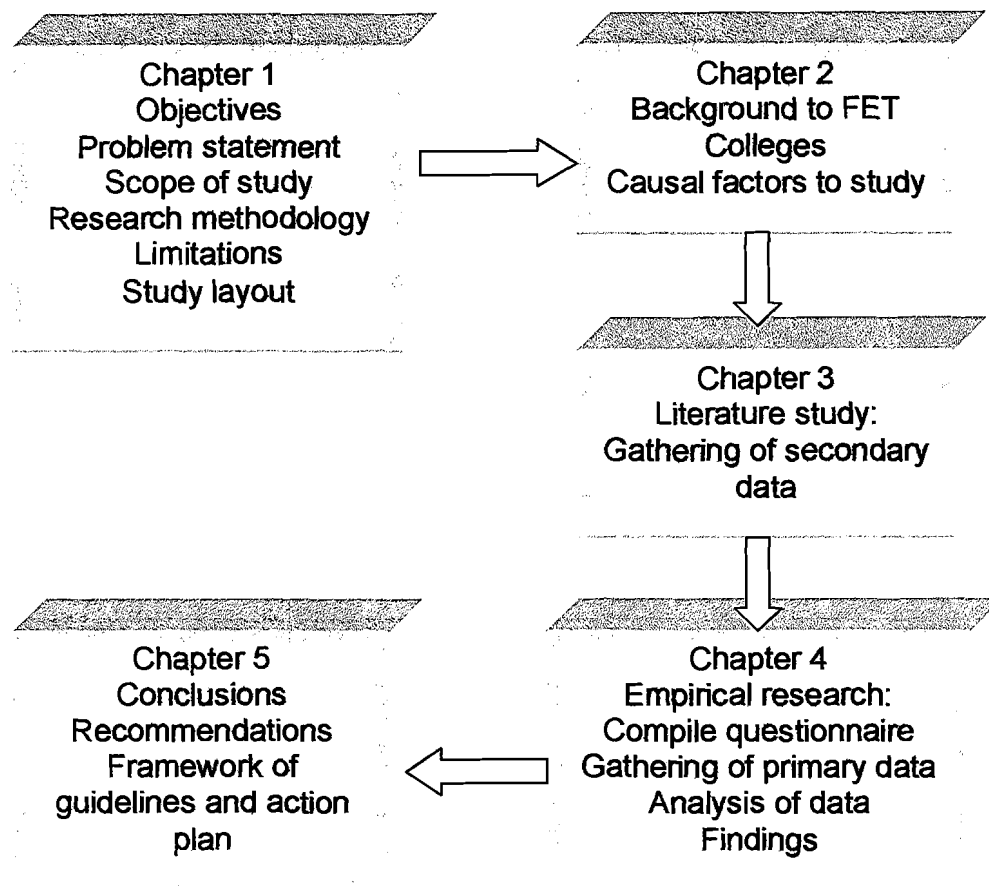
Chapter 3 comprises a literature study that will be conducted to gain insight into the subject discipline of intrapreneurship, with special emphasis on its prevalence in the public sector. The focus of the literature study in the first instance is to define public

intrapreneurship and to investigate the dynamics of intrapreneurship in the public sector. Thereafter corporate entrepreneurial characteristics are investigated and constructs of intrapreneurship reviewed, as proposed by Van der Merwe and Oosthuizen (2008). Finally strategies on the fostering of intrapreneurship within an institution will be investigated.

The empirical study and its findings are discussed in chapter 4. The study consists of a survey conducted by means of a structured self-completion questionnaire. The main objective of the questionnaire is to determine the current level of intrapreneurship within the FET colleges. Subsequent to that, perceptions of managers regarding entrepreneurial characteristics are determined.

In chapter 5 conclusions will be drawn from the findings of the empirical study, indicating perceptions of managers on the current level of intrapreneurship within the four FET colleges. Based on the findings, a framework of guidelines and an action plan will be developed that incorporate recommendations on how to create a climate conducive to intrapreneurship within the colleges. Special emphasis will be placed on the dynamics of the public sector environment and the manner in which sector-specific constraints could be overcome. A critical evaluation of the study will be made to indicate whether research objectives have been attained and lastly recommendations will be presented on the need for further research pertaining intrapreneurship in the public sector.

Figure 1.2: Layout of the study



CHAPTER 2

BACKGROUND TO THE PUBLIC FURTHER EDUCATION AND TRAINING (FET) COLLEGE ENVIRONMENT IN SOUTH AFRICA

2.1 INTRODUCTION

The vision of the Department of Education for the FET college sector entails the following: *“A modern and vibrant nationally co-ordinated FET college system that builds a foundation for lifelong learning and is responsive to the needs of the 21st century”* (National Plan for FET Colleges in South Africa, 2008:15). To fulfill this vision, the FET sector has a number of challenges that must be faced and managed. Some of these challenges include:

- Lack of a sector identity;
- Low responsive rates to needs of community and economy;
- Low levels of state funding of FET sector;
- Shortage of suitably qualified lecturers for vocational programmes, especially in engineering fields and other scarce skills; and
- Shortage of managerial skills and capacity.

Source: National Plan for FET Colleges in South Africa (2008: 14)

In order to manage these challenges effectively, a change in the mindset of managers and employees in the FET College sector would have to occur. An entrepreneurial culture is needed that would lead to increased productivity and improved service delivery. Sadler (2000: 25) supports the idea that corporate entrepreneurship in the public sector is the leading force in public management reform.

In this chapter, an overview is given of public FET colleges including their market environment, target markets, programme offerings and funding mechanisms. The

autonomy of public FET Colleges vis a vis legislative control measures is highlighted and the background sketch is concluded by a staff profile. Thereafter causal factors to the study are discussed.

2.2 BACKGROUND TO PUBLIC FET COLLEGES

2.2.1 Historical overview and legislative framework

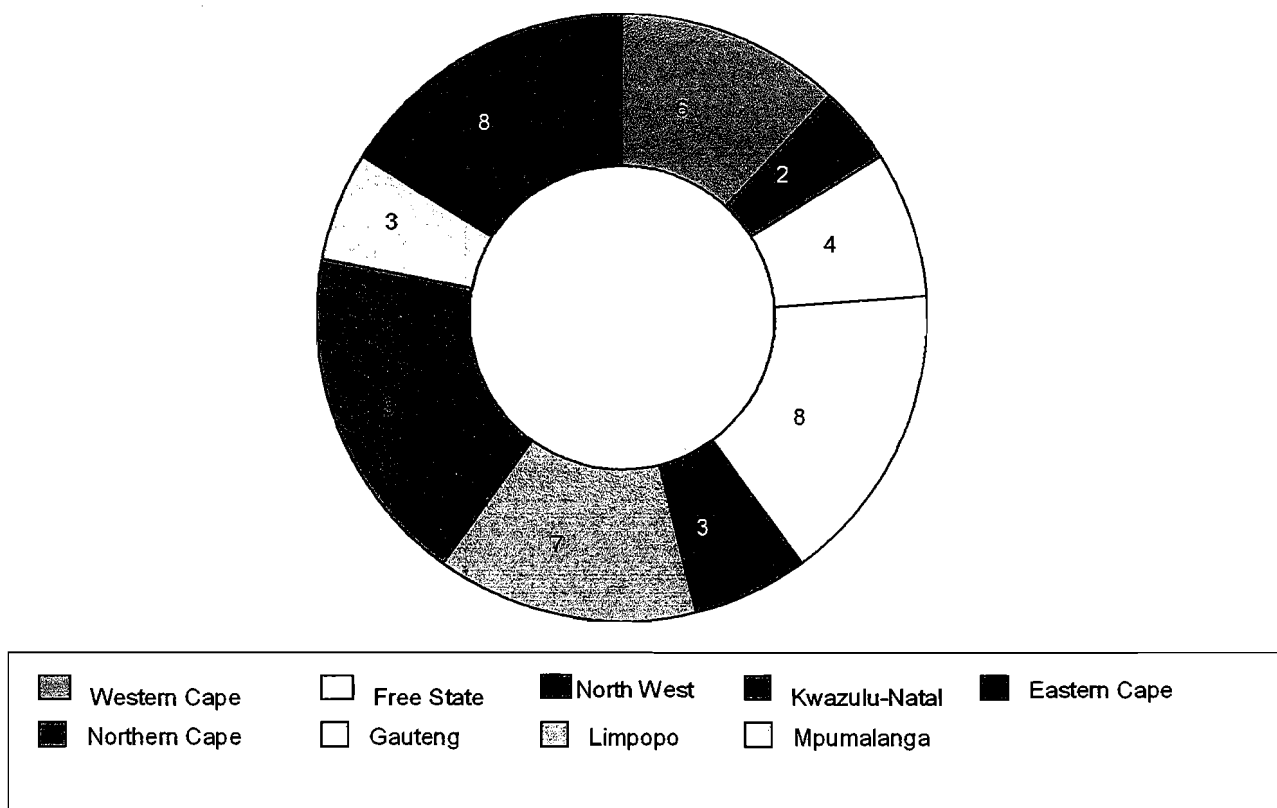
In 1995 the vocational and technical component of the education and training system in South Africa comprised 152 public technical colleges located throughout the country. These colleges were managed and funded in different ways and were managed by various education departments (National Plan for FET Colleges in South Africa, 2008:8). Technical colleges were regarded as the last choice for students who had dropped out of the school system or who did not have the means to go to other tertiary institutions. Furthermore public FET Colleges had an image of rendering poor quality service and being unresponsive to community needs.

In order to transform vocational education in South Africa, the National Commission on Further Education (NCFE) was established in 1996. The National Commission published its report in August 1997 and this formed the basis of the Green Paper on Further Education and Training of April 1998 and Education White Paper 4 of September 1998. The Further Education and Training Act (98 of 1998) followed soon afterwards. This Act provided guidance and governance to FET Colleges from 1998 till 2006, when a new FET Act (16 of 2006) was promulgated.

Under the Further Education and Training Act (16 of 2006) College Councils have become the employer of all staff, except for the Principal and Vice-Principal(s) who are employed by the Provincial Departments of Education in terms of the Public Service Act. The FET Act (16 of 2006) clearly stipulates the roles and responsibilities of governance bodies at FET colleges, namely that of the College Councils, Academic Boards and Student Representative Councils (SRC).

In 2000 a task team was established and its brief was to develop a national strategy to transform the FET College sector in South Africa. The recommendations of the task team were published in July 2001. The task team recommended that the 152 technical colleges be merged into 50 public FET colleges with new names and established councils by April 2003 (National Plan for FET Colleges in South Africa, 2008:9). In figure 2.1, the dispersion of FET Colleges per province is indicated.

Figure 2.1 Dispersion (in %) of Public FET Colleges by Province



Source: Powell and Hall (2004: 15)

Nine public FET Colleges are located in the province of Kwazulu-Natal enrolling 16% of the total FET student fraternity. Two provinces have eight Colleges each, i.e. Gauteng and the Eastern Cape. Four public FET Colleges are located in the Free State province,

enrolling 8% of the total number of FET students (Powell & Hall, 2004:15). A brief overview of the Free State colleges is provided in section 2.3.

Public FET Colleges form part of the larger landscape of further education and training and can therefore not operate in isolation. The colleges are bound to national priorities and policies. Consequently aspects that are of national and provincial importance inform their strategic intentions and planning. Of particular importance for FET Colleges are the targets as indicated in the *Accelerated and Shared Growth Initiative of South Africa (ASGISA)* which include:

- To reduce unemployment by half by 2014;
- To reduce poverty by half by 2014; and
- To provide the skills required by the economy.

Source: derived from a speech by Deputy-President Mlambo-Ngcuka (2006: 8)

The *Accelerated and Shared Growth Initiative of South Africa (ASGISA)* and the *Joint Initiative for Priority Skills Acquisition (JIPSA)* were put in place to promote skills development in South Africa, directly influencing the choice of programmes on offer at colleges. Various other government initiatives also have a bearing on public FET Colleges. These include the Skills Development Act of 1998, the Skills Development Strategy (2001 to 2005) and the National Skills Development Strategy II (2006 – 2010.)

2.2.2 The recapitalisation programme

A recapitalisation programme for FET Colleges was announced by the National Department of Education in April 2005 and R1.9 billion was allocated to public FET Colleges over a 3-year period. The aim of the recapitalization programme was to upgrade facilities at Colleges in order to support the delivery of the new National Certificate (Vocational) programmes that would replace the old N1 to N6 programmes. The syllabi for the new National Certificate (Vocational) emphasise the importance of practical training that runs concurrently with theoretical training. Workshops, industrial kitchens and other practical laboratories must be put in place to ensure that students are

trained in accordance with the needs of business and industry. FET colleges would need substantial financial and other resources to comply with these requirements. This emphasises the importance of establishing and maintaining an intrapreneurial makeup within FET colleges that comprises inter alia the ability to combine resources creatively in order to capitalise on them (Anon., 2008b: 1).

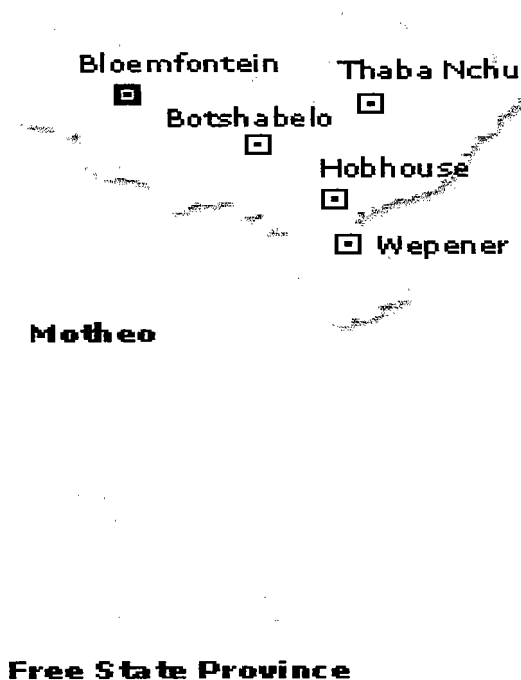
2.3 BRIEF OVERVIEW OF FREE STATE PUBLIC FET COLLEGES

The four public FET colleges in the Free State province that comprise the population of this study are Motheo FET College, Maluti FET College, Goldfields FET College and Flavius Mareka FET College.

2.3.1 Motheo FET College

The college is located in the Motheo regional district of the Free State that comprises urban and rural communities. Bloemfontein, the capital of the Free State and the judiciary capital of South Africa, is located within this regional district. Motheo FET College consists of three campuses, namely Bloemfontein Campus, Hillside View Campus (located in Mangaung that is situated close to Bloemfontein) and Thaba Nchu Campus that is sited in the rural town of Thaba Nchu. The college has five satellite campuses that are dispersed throughout the regional district. Motheo FET College is the largest of the four public FET colleges in the Free State province.

Figure 2.2 Map of Motheo regional district



Source: South African Tourism Association, 2008.

http://www.places.co.za/hfree_statemap.html Date of access: 17 July 2008.

2.3.2 Maluti FET College

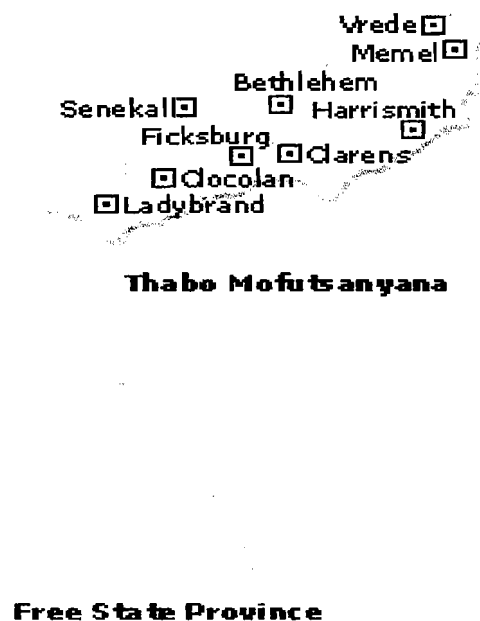
Maluti FET College, the second largest in the Free State, consists of eight campuses and is located in the Thabo Mofutsanyana regional district of the Free State. The eight campuses are dispersed throughout the regional district in mostly rural areas:

- Phuthaditjhaba: Main campus; Bonamelo Campus; Itemoheleng Campus;
- Kwetlisong Campus; Lere la Tshepe Campus and Sefikeng Campus;
- Bethlehem: Bethlehem Campus; and
- Harrismith: Harrismith Campus.

Various agricultural products are cultivated in the district, among others cut flowers, cherries, asparagus, soya beans, wheat and sorghum. Two of South Africa's largest

asparagus canning factories are situated in Ficksburg, whereas commercial farmers also specialise in seed production (South Africa.Info Gateway to the nation, 2008. The Free State Province. <http://www.southafrica.info/about/geography/free-state.htm> Date of access: 17 July 2008).

Figure 2.3 Map of Thabo Mofutsanyana regional district



Source: South African Tourism Association, 2008.
http://www.places.co.za/hfree_statemap.html Date of access: 17 July 2008.

2.3.3 Goldfields FET College

Goldfields FET College is located in the Lejweleputswa regional district of the Free State. It is in the heartland of the gold mine industry where 30% of South Africa's gold is produced and the only two gold refineries in South Africa are located (South Africa.Info Gateway to the nation, 2008. The Free State Province. <http://www.southafrica.info/about/geography/free-state.htm> Date of access: 17 July 2008).

Furthermore, the mines supply silver and uranium which is extracted as by-products of gold production. The College has two campuses, i.e. Welkom Campus and Tosa Campus. Both campuses are situated within the boundaries of the Welkom city area and it is not surprising that jewellery manufacturing is offered as one of its courses.

Figure 2.4 Map of Lejweleputswa regional district



Source: South African Tourism Association, 2008.
http://www.places.co.za/hfree_statemap.html Date of access: 17 July 2008.

2.3.4 Flavius Mareka FET College

This college is situated in the Fezile Dabi regional district and has three campuses. Sasolburg Campus that consists of two sub-campuses, namely a Business Studies site and an Engineering studies site, is located in Sasolburg. This is the hometown of SASOL, a gigantic petrochemical company that is a world leader in the production of synthetic fuels, waxes, chemicals and low-cost feedstock from low-grade coal (SASOL

history, 2008. http://www.sasol.com/sasol_internet/frontend/navigation.jsp Date of access: 17 July 2008; South Africa.Info Gateway to the nation, 2008. The Free State Province. <http://www.southafrica.info/about/geography/free-state.htm> Date of access: 17 July 2008). Kroonstad Campus and Mphohadi Campus are situated in Kroonstad, a large town in the centre of the Free State province and an important agricultural centre.

Figure 2.5 Map of Fezile Dabi regional district



Free State Province

Source: South African Tourism Association, 2008.
http://www.places.co.za/hfree_statemap.html Date of access: 17 July 2008.

2.4 MARKET ENVIRONMENT OF FREE STATE PUBLIC FET COLLEGES

Barringer and Bluedom (1999: 422) state that the level of corporate entrepreneurship of a firm is influenced by its internal and external environments. Since this study focuses on the four public FET colleges in the Free State province of South Africa, socio-economic factors prevalent in the province also have a bearing on their operating

environment. The following socio-economic factors that impact negatively on the population of the Free State and hence also on the colleges, have been identified in the Free State Growth and Development strategy (2005: 8):

- High unemployment rate of 43%;
- Low income per capita of R12 334, with a dependency factor of 4.24. This means that on average an employed person has 4.24 relatives depending on him/her for livelihood. This implies that limited discretionary funds would be available to spend on enrolling at FET Colleges; and
- High poverty rate as indicated by household income of less than R800 per month: 44.3% for males and 59.7% for females on average in the Free State (Statistics South Africa, 2001: 86).

To counteract the threats posed by the poor socio-economic conditions in the Free State province would require of public FET college management teams to form strategic alliances with partners. In this manner, competitive advantages can be created by the optimum utilisation of scarce resources (physical or otherwise). For example, offering off-site training in rural areas with no FET facilities would enable students living in the area to enroll for courses, without the need to travel to fully-fledged FET campuses; – something they can ill afford. Thus FET college organisational structures would have to be revisited to make provision for decentralisation and flatter structures.

2.5 TARGET MARKETS OF PUBLIC FET COLLEGES

According to the National Plan for FET Colleges (2008: 24), the Department of Education would indicate which specific target groups should be prioritized and funded based on national economic needs. Furthermore, the Department has determined that one million FET students must be enrolled by 2014. It has earmarked the following two main target markets.

- Unemployed, out-of-school youth in the age group 16 to 24 years who have exited the school system with less than NQF level 4 (grade 12) qualifications; and
- Employed and unemployed adults who wish to improve their skills or progress to higher education.

A public FET college could extend its services to other target markets as well, but based on the premise that such programmes would not be funded by the Department of Education. It would be paid for by means of a negotiated fee between the College and the specific stakeholder. This necessitates teamwork and networking; as well as the ability to “think out of the box” – typical entrepreneurial characteristics. In the empirical study the current level of entrepreneurial thinking prevalent at Free State FET Colleges would be investigated; thus providing useful data that would be utilised in developing the framework of guidelines that could inform the fostering of an intrapreneurial climate within the colleges.

2.6 PROGRAMME OFFERINGS OF FET COLLEGES

The N1 to N6 programme offerings of public FET colleges are currently being phased out and are being replaced by the National Certificate (Vocational) programmed on the National Qualifications Framework (NQF) Level 2 to 4. In 2007, eleven new programmes were being offered by Colleges. In addition to these programmes, colleges may also offer Higher Education programmes on NQF level 5, subject to approval by the Minister of Education as well as learnerships and skills programmes that are funded through the National Skills Fund or the private sector.

The Department of Education determines the programme offerings of FET colleges based on national priorities that emerge from national strategies such as the *Accelerated and Shared Growth Initiative of South Africa* (National Plan for FET Colleges in South Africa, 2008:23). It is the task of the College Academic Board, subject to approval by the College Council, to determine from the list of nationally registered programmes, which of these would be offered at a specific college as well as the

number of students to be enrolled. However, final approval still lies with the National Department of Education.

2.7 FUNDING OF PUBLIC FET COLLEGES

A recapitalization programme for FET Colleges was announced by the National Department of Education in April 2005 and R1.9 billion was allocated to public FET colleges over a 3-year period. The aim of the recapitalization programme was to upgrade facilities at colleges in order to support the delivery of the new National Certificate (Vocational) programmes that would replace the old N1 to N6 programme offerings. The new National Certificate (Vocational) programmes' syllabi emphasise the importance of practical training that runs concurrently with theoretical training. Workshops, industrial kitchens, laboratories and practice rooms must be put in place to ensure that students are trained in accordance to the needs of business and industry. FET colleges would need substantial financial and other resources to comply with these requirements. The need for sufficient resources emphasises the importance of establishing and maintaining an intrapreneurial make-up within FET colleges that comprises inter alia the ability to creatively combine resources in order to capitalise on them (Accenture, 2008b: 1).

The FET sector currently receives 3.4% of the various provincial education budgets (National Plan for FET Colleges in South Africa, 2008:34). Other sources of income of FET colleges include student fees, fees for services rendered; rentals, donations and fees received from learnerships and skills programmes. In the *White Paper for the Transformation of Further Education and Training* (SA, 1998: 33) it was indicated that the new funding approach will comprise programme-based funding; funding for special purposes, student financial aid and private funding.

2.7.1 Programme-based funding

Programme-based funding is based on an approach whereby the average annual programme cost per student is determined for every approved NC(V) programme. The number of students enrolled in NC(V) programmes at an institution would directly influence the amount of money that would be paid to the college by the Department of Education. In order to be financially viable, colleges would have to lure more students and retain them for the duration of the programme. Processes within colleges will have to be revisited and renewed to be more responsive, effective and efficient.

2.7.2 Funding for special purposes

Funding for special purposes includes funding for projects that enjoy national priority, for example staff development and the building of management capacity. The *White Paper for the Transformation of Further Education and Training* (SA, 1998: 34) indicates that funding may also be made available for the development of programmes aimed at developing community skills for meeting basic needs. Colleges would have to scan the environment for opportunities and then exploit them by developing innovative skills programmes that address the needs.

2.7.3 Financial aid to students

In October 2006 a 3-year bursary scheme (2007 to 2009) for needy students was introduced in the FET sector. The continuation of this scheme will be dependent on resources available to government. The possible cancellation of bursaries poses a threat to colleges, but it can also be exploited as an opportunity whereby colleges could, in alliance with partners, render financial assistance to students and in this way gain a competitive advantage.

2.7.4 Private funding

In order to increase private contributions, FET colleges will have to form joint ventures and partnerships with external stakeholders. Given the limitations of other funding sources, accessing private funding will have to be vigorously explored by colleges necessitating a culture change that incorporates risk taking, tolerance of failure and high levels of perseverance within the institutions. Furthermore, all resources would have to be combined in a creative manner to ensure maximum efficiency.

2.8 INSTITUTIONAL AUTONOMY AND RESPONSIVENESS VIS-A-VIS LEGISLATIVE CONTROL MEASURES

In the preamble of the FET Act (16 of 2006) it is stated that it is necessary to “*restructure and transform programmes and colleges to respond better to the human resources, economic and development needs of the Republic*”. According to the National Plan for FET Colleges in South Africa (2008: 51), greater autonomy to govern and manage their own affairs, would enable public FET colleges to be more responsive and flexible.

One way to achieve this higher level of responsiveness is by means of forming partnerships and joint ventures with both private and public stakeholders. This could result in economies of scale benefits. Flexibility in terms of modes of service delivery would enable colleges to cater for a broader spectrum of clients and would facilitate new product development.

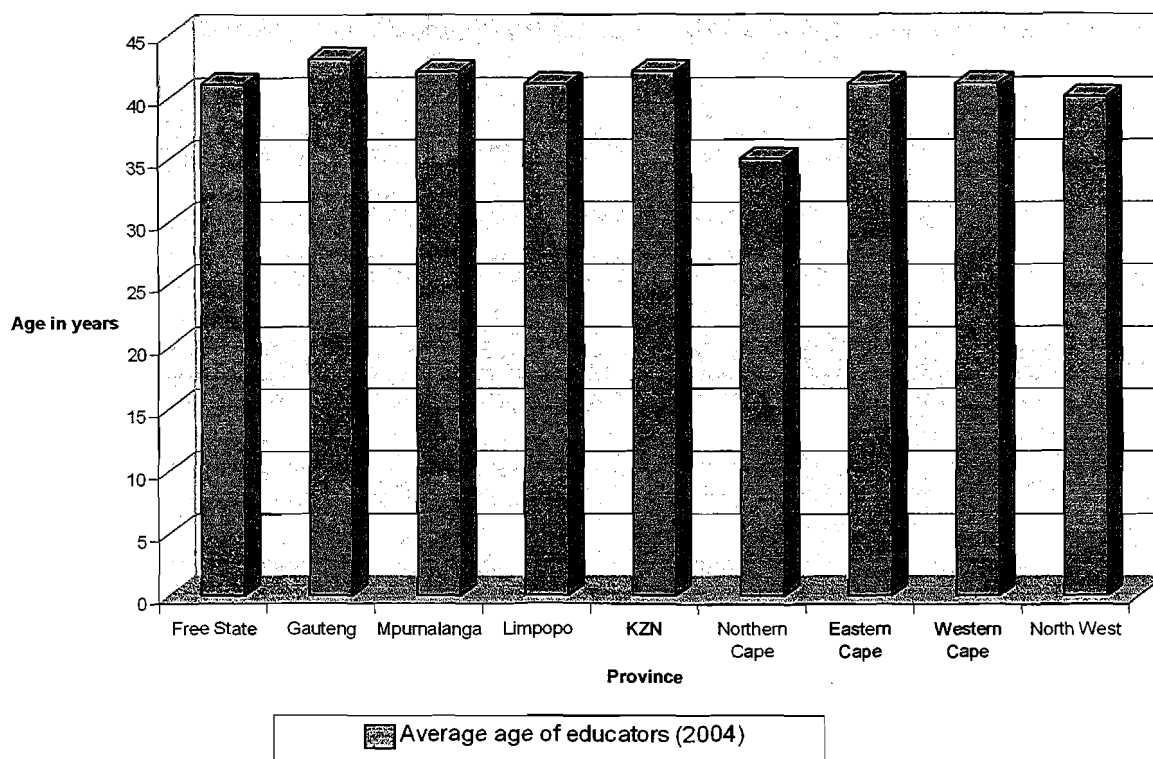
Although public FET colleges did obtain more autonomy in terms of the FET Act (16 of 2006) cognisance should be taken of the fact that measures of control are still largely exerted by the National and Provincial Departments of Education respectively. This situation ultimately limits the extent to which colleges may exert autonomous behaviour and it might negatively influence the fostering of an intrapreneurial climate within these institutions. Stevenson and Jarillo (1990: 24) hypothesise that the level of corporate entrepreneurship within an organisation is positively correlated to the extent in which the

individual is encouraged and allowed to spot opportunities, pursue them and be rewarded for his/her efforts. To reconcile the limitations imposed by government upon the colleges and the encouragement of pro-active, entrepreneurial behaviour patterns within these institutions, would pose a major challenge to management and governance structures alike.

2.9 STAFF PROFILE AT PUBLIC FET COLLEGES

In a study conducted by Powell and Hall (2004: 30) it was found that the average age profile of educators at public Colleges is 41.1 years. This gives a rough indication of the number of years' experience of these staff members and subsequently the depth of their knowledge of the public FET sector. This fact also suggests that young people are not lured to a career in FET education, which could negatively impact on innovation in the sector. The empirical study would investigate the possible correlation between the age of an employee and an intrapreneurial mindset. In figure 2.6 the age spread of educators across provinces is indicated.

Figure 2.6: Average age of educators (2004)



Source: Powell and Hall (2004: 30)

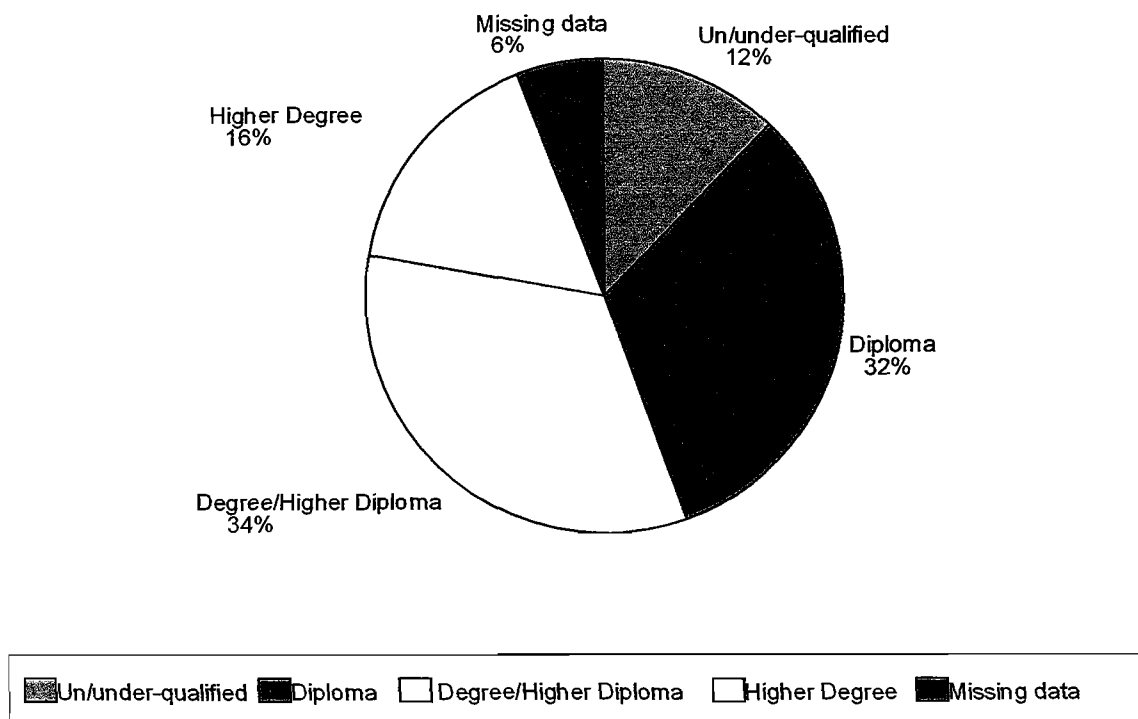
Powell and Hall (2004: 29), furthermore, alleged that the range of qualifications held by educator staff in 2004 at FET Colleges was considerable. The authors group the qualifications into four broad categories:

- Category 1: all higher degrees and equivalent qualifications;
- Category 2: first degrees and higher diplomas;
- Category 3: all diplomas; and
- Category 4: all appropriate qualifications at a level below that of a diploma, which may be regarded as being under- or unqualified.

As can be deduced from figure 2.7, 34% of educators employed at FET Colleges in 2004 had a degree or a higher diploma, 32% had diplomas; 16% had higher degrees and 12% were regarded as un/underqualified. The latter group also included educators

from the Engineering field of study who were qualified artisans, but without a formal educator qualification. The fact that educators without a professional qualification are lecturing at public FET colleges is regarded as a challenge by the authors of the National Plan for FET Colleges in South Africa (2008: 14).

Figure 2.7 Qualifications held by educators (2004)



Source: Powell and Hall (2004: 29)

The National Plan for FET Colleges in South Africa (2008: 14) highlights that the shortage of suitably qualified lecturers for vocational programmes as well as a shortage of staff with managerial skills is regarded as challenges for public FET Colleges. In the empirical study the correlation (if any) between qualification and intrapreneurial behaviour would be investigated.

2.10 CAUSAL FACTORS NECESSITATING THE STUDY

To survive in a turbulent market place while at the same time deliver on their mandate, management teams and Councils at Public FET Colleges would have to focus on fostering a climate of intrapreneurship within these institutions. It is imperative that public FET colleges start to function like their counterparts in the private sector. In order to succeed in this goal, certain prerequisites must be in place. Following are a number of causal factors that highlight the importance of a study on intrapreneurship at public FET colleges.

2.10.1 Lack of holistic approach regarding vision, mission and strategic thrust

Successful intrapreneurial performance within public FET colleges is dependent on whether the elements that drive organisations, i.e. the vision, mission, corporate values and strategic plan, are holistically formulated and implemented. Furthermore, fostering strategic thinking within FET colleges is a key factor to build and strengthen their long-term competitive positions. A gap currently exists at public FET Colleges in the Free State province regarding the determination of visions, the formulation of strategic plans and the actual implementation thereof. Management teams at this point in time are bogged down with operational matters and do not have sufficient time for strategic thinking and planning.

This study is necessary in the first instance to determine the current situation at the colleges regarding the holistic formulation and implementation of their visions, values and strategic plans. Secondly, the study would aim to determine the extent of strategic thinking processes at public FET colleges.

Based on the findings of the study, recommendations would be made to assist colleges to close the identified gaps between the formulation and implementation of their visions and strategic plans to strengthen their competitive positions.

2.10.2 Lack of an intrapreneurial spirit

The National Department of Education has set an objective to enrol 1 million students by 2014 at FET Colleges to alleviate the skills shortage in the country (National Plan for FET Colleges, 2008: 24).

In order to adhere to student enrollment targets as determined by the National Department of Education, public FET colleges would need substantial financial, human and physical resources, which are currently not available. This fact implies that management teams and College Councils would have to find additional sources of funding to ensure that they employ a sufficient number of educators to provide tuition to the increasing number of students, as well as providing adequate physical facilities such as workshops and teaching equipment.

To expand the services provided by FET colleges as envisaged by the FET Act (Act 16 of 2006), management teams would need to have the necessary entrepreneurial skills to manage colleges in such a way that it will allow room for innovation and creativity. Currently intrapreneurship with concomitant creativity and high rates of responsiveness are lacking in colleges to a great extent. Insufficient attention is paid to product development, primarily as a result of the lack of human resources currently being experienced at the institutions. Staff with the necessary skills and entrepreneurial characteristics has been deployed in acting positions to ensure that FET colleges remain operational. These staff members do not have sufficient time at their disposal to develop their entrepreneurial ideas. Furthermore, colleges do not focus sufficiently on the needs of their clients, resulting in many opportunities not being exploited. The situation is exacerbated by complex organisational structures and long decision making channels that currently exist within colleges.

This study aims to determine the current status of the intrapreneurial climate within four public FET colleges, upon which recommendations would be made to assist Colleges in

fostering an intrapreneurial climate imperative for increased responsiveness, innovation and institutional sustainability.

2.11 SUMMARY

In this section an overview has been given regarding the market environment and idiosyncrasies of public FET colleges. Public colleges have to face various challenges such as a negative public image, a lack of sector identity and a scarcity of resources.

The legislative framework within which colleges have to operate has been discussed as well as its impact on the internal environment of these institutions.. Government has high expectations of public FET colleges regarding the alleviation of the skills shortage in the country. To this effect, a substantial amount has been allocated in the form of a recapitalisation grant. The main objective of this grant is to upgrade physical facilities and to provide training for educator staff.

Colleges do not operate in isolation, therefore socio-economic variables in their market environment also impact on them. Since this study focuses only on the four public FET colleges in the Free State province, socio-economic factors prevalent in this province have been presented. In the discussion the high unemployment rate and low income per capita in the province, among others, were singled out.

Government has identified two main target markets i.e. unemployed, out of school youth and unemployed adults. If colleges want to extend their services to other target markets such as business clients, the two parties would have to negotiate a fee, since the Department of Education would not sponsor such training interventions.

The Department of Education determines the programmes that are to be offered at FET colleges based on pre-determined national priorities. The existing N1 to N6 programmes are being phased out and will be replaced by National Certificate (Vocational) programmes on NQF level 2 to 4. In addition to these programmes, colleges may also

offer Higher Education programmes on NQF level 5, subject to approval by the Minister of Education as well as learnerships and skills programmes that are funded through the National Skills Fund or the private sector.

Sources of income for colleges include provincial subsidies, student fees, fees for services rendered, rentals, donations and fees received from learnerships and skills programmes. A new funding norm for public FET colleges is currently being developed and will comprise programme-based funding; funding for special purposes, student financial aid and private funding. FET Colleges would need substantial financial resources to comply with the requirements of the new National Certificate (Vocational) programme and to remain financially stable. This emphasises the importance of the creative utilization of resources as well as the formation of strategic alliances with partners.

The extent of autonomy granted to public FET Colleges in terms of the FET Act (16/2006) has been discussed, taking into consideration control measures exerted by the National and Provincial Departments of Education respectively. It was indicated that the reconciliation of limitations imposed on colleges by government on the one hand and the encouragement of pro-active, intrapreneurial behaviour patterns within these institutions on the other hand, would pose a major challenge to management and governance structures alike.

The average age profile of educators at public Colleges is 41.1 years, indicating the number of years of experience and their knowledge of the public FET sector. Furthermore, in the discussion it was stated that this can also be an indication that young people are not lured to follow a career at FET colleges. This could impact negatively on innovation in the sector. A challenge for management teams is the fact that in 2004, 12% of FET educators were found to be un/under qualified. This could have an impact on the quality of service delivery.

To be able to deliver on their mandate, management teams and College Councils would have to adopt cultures of intrapreneurship. This implies that information would be required on how to plan and implement a turn-around strategy. Causal factors that necessitated an empirical study include aspects such as a fragmented approach by colleges to vision, mission and strategic planning as well as a lack of intrapreneurial spirit that currently exists within these institutions.

This study can contribute significantly in creating a better understanding of what intrapreneurship entails in the public FET sector. Furthermore, by providing a framework of guidelines for use by college management teams on how to increase intrapreneurship within institutions can result in improved levels of service delivery, benefitting all stakeholders in the sector.

CHAPTER 3

INTRAPRENEURSHIP AND INTRAPRENEURIAL CLIMATE: A LITERATURE REVIEW

3.1 INTRODUCTION

The contemporary global economy is becoming increasingly complex and risky, but at the same time improved communication and transport technology enable companies to operate from countries all over the globe. International businesses prefer to invest in countries with high levels of economic competitiveness regarding factors such as physical infrastructure, skilled labour and a conducive business climate.

South Africa has been ranked in the 45th position regarding its global competitiveness (Von Broembsen *et.al.*, 2005: vii). Despite improved conditions in its macro-economic environment, South Africa's competitive ranking has deteriorated since it joined the Global Entrepreneurship Monitor (GEM) survey study in 2001. In the 2006 GEM study, it was indicated that potential entrepreneurs – especially on micro level – not only lack entrepreneurial mindsets, but also the necessary skills. According to Maas and Herrington (2006: 6), these were key contributing factors to the decline in South Africa's competitive position.

General business conditions that affect the competitiveness of enterprises include macro-environmental variables such as the openness of the economy in terms of trade, the extent to which government intervenes in the economy and the condition of physical infrastructure. Individual entrepreneurs are influenced by conditions such as access to finance, government policies and programmes, education and training and access to physical infrastructure (Maas & Herrington, 2006: 14).

Government plays an important role by focusing on entrepreneurial activity that would lead to national economic growth, job creation and technical innovation (Maas & Herrington, 2006: 19). If South Africa wants to improve its global competitive position the public sector would have to revisit the manner in which it conducts its daily business. Maas and Herrington (2006: 20) argue that “service delivery on various government levels must improve drastically”.

In order to improve the competitive position of South Africa, a change in the mindset of managers and employees in the public sector would be needed. The traditional bureaucratic way of doing business would have to be adapted to one that is inclined towards intrapreneurship, increased productivity and improved service delivery. This idea is supported by Sadler (2000: 25). The author postulated that intrapreneurship in the public sector is currently emerging as a leading force in public management reform.

Following is an exposition of the results of a literature study that has been conducted to gain more insight into the subject discipline of intrapreneurship, with special emphasis on its prevalence in the public sector.

3.2 INTRAPRENEURSHIP

Richard Cantillon, who belonged to the French school of thought on entrepreneurship, first coined the term entrepreneurship in the early 1700's. He defined entrepreneurship as “bearing the risk of buying at certain prices and selling at uncertain prices” (Stevenson & Jarillo, 1990: 17). According to Cantillon, an entrepreneur aims to get a balance between supply and demand markets by taking risks and exploiting opportunities (Meintjes, 2006: 32). Leibenstein, on the other hand, argues that the entrepreneur's basic function is “the destruction of pockets of inefficiency in the system” (Stevenson & Jarillo, 1990: 19).

In 1934 Schumpeter, who put forward the association between entrepreneurship and innovation, indicated that entrepreneurial behaviour also occurs within organisations (Stevenson & Jarillo, 1990: 19). Over the last decade or two, intrapreneurship has gained significance as conduit to innovation within institutions (Van der Merwe &

Oosthuizen, 2008: 1). Hisrich, Peters and Shepherd (2005: 43 – 44) identified causes for the escalating interest in intrapreneurship. According to Hisrich *et al.* (2005: 43), there is an increased need among employees for individual expression and “doing their own thing” in the organisation. Lacking this freedom may encourage employees to leave organisations in search of employment elsewhere. Therefore, employers came to realise the importance of creating an environment conducive to intrapreneurship that would augment employee innovativeness and contribute to corporate sustainability and growth.

Robinson (2001: 95) contends that intensifying competitiveness in the market environment contributes to the increased interest in intrapreneurship. It is argued that intrapreneurship can improve the financial and market performance of a firm by driving knowledge creation and new competencies (Robinson, 2001: 95 - 96). According to Thomberry (2001: 526), intrapreneurship can serve as a remedy for stagnation and lack of innovation in large organisations.

3.2.1 Definition of intrapreneurship

Analogous terms to intrapreneurship include corporate entrepreneurship and corporate venturing (Morris & Kuratko, 2002: 31). Intrapreneurship can be regarded as entrepreneurial behaviour patterns within an organisation (Hisrich *et al.*, 2005: 17; Kuratko, Montagno & Hornsby, 1990: 50). Barringer and Bluedom (1999: 422) define intrapreneurship as a “behavioural phenomenon”, while Bhardwaj and Momaya (2006: 37) claim that intrapreneurship refers to the creation of new business ventures as well as other innovative processes such as the development of products and services.

Covin and Miles (1999: 50) support the notion regarding innovative practices and the purposeful redefining of companies and industries as being indicative of the existence of intrapreneurship within organisations. Sharma and Chrisman (1999: 18) have a similar viewpoint. The authors define intrapreneurship as an innovative process driven by an individual or group of individuals within an organisation that results either in organisational renewal or the establishment of a new enterprise.

3.2.2 Types of intrapreneurship

Stopford and Baden-Fuller (1994: 521) identify three types of intrapreneurship:

- Intrapreneurship or new business venturing;
- Activities that change the “rules of competition” in an industry; and
- The renewal of an existing organisation to be more innovative.

Dhliwayo (2007: 98) argues that intrapreneurship can be divided into four categories, i.e. corporate venturing, intrapreneurship, corporate renewal and industry rule-breaking.

There is agreement among scholars in the field that intrapreneurship is a departure from the customary way of doing business (Morris & Kuratko, 2002: 39; Covin & Miles, 1999: 50). Certain dimensions of intrapreneurship have been identified and will be discussed below.

3.2.3 Dimensions of intrapreneurship

Morris and Kuratko (2002: 39) identify three dimensions of intrapreneurship, i.e. innovation, risk taking and pro-active behaviour patterns. According to Burns (2004: 12), intrapreneurship consists of innovation, pro-active behaviour as well as corporate venturing. Hisrich *et al.* (2005: 44) on the other hand, contend that intrapreneurship comprises five dimensions, i.e. new business venturing, organisational self-renewal, innovativeness and pro-activeness. Two additional dimensions, namely competitive aggressiveness and autonomy, are proposed by Dess and Lumpkin (2005: 147), while Antoncic and Hisrich (2004: 520; 2003: 19) list eight dimensions of intrapreneurship as shown in table 3.1.

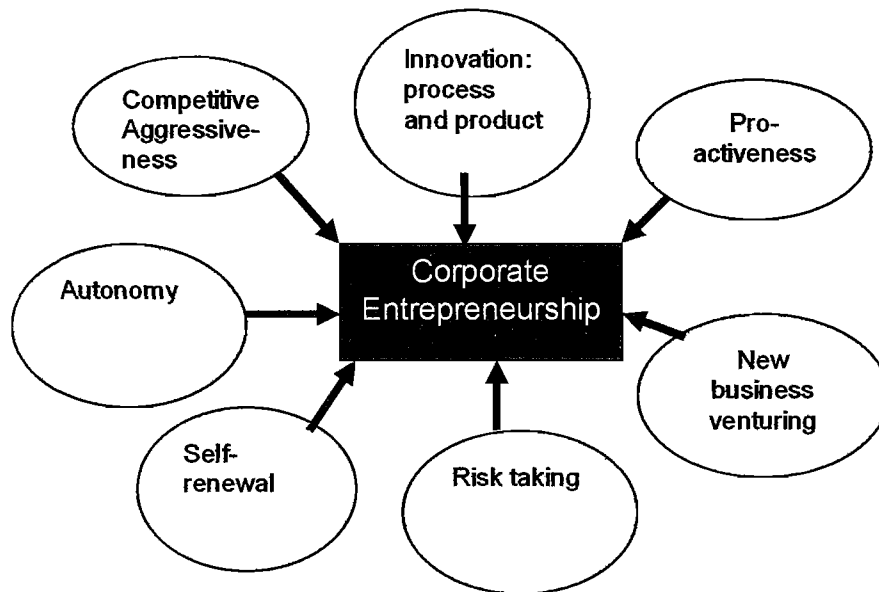
Table 3.1 Dimensions of intrapreneurship

Dimension	Definition	Theoretical ground
Self-renewal	Reformulation of strategic intent; organisational change	Stopford and Baden-Fuller (1994) Vesper (1984)
Risk-taking	Risk of failure	Mintzberg (1973) Morris and Kuratko (2002)
Process innovation	Innovativeness regarding processes and procedures	Covin and Slevin (1991)
New businesses	Related diversification	Stopford and Baden-Fuller (1994)
New ventures	Autonomous new businesses or business units	Hisrich and Peters (1984) Vesper (1984)
Product/service innovation	Creation of new products/services	Covin and Slevin (1991)
Pro-activeness	Taking initiative; pioneering behaviour patterns	Stopford and Baden-Fuller (1994) Covin and Slevin (1986; 1991)
Competitive aggressiveness	Response to competitive threats; strategies to out-perform rivals	Covin and Slevin (1986; 1991) Dess and Lumpkin (2005: 147)

Source: Adapted from Antoncic and Hisrich (2003: 19) and Dhlwayo (2007: 99)

Considering the similarities that exist between the various theories, it can be argued that intrapreneurship consists of seven dimensions as indicated in figure 3.1.

Figure 3.1 Seven dimensions of intrapreneurship



These dimensions and their influence on the intrapreneurial climate will be discussed in more detail in section 3.4.

Taking into consideration the sector-specific characteristics of the public sector, i.e. transparency, citizenship behaviour and stewardship, the question arises whether it is possible to establish and maintain a culture of intrapreneurship therein? And if so, are there similarities and/or differences between intrapreneurship in the private sector and the public sector? In the next section intrapreneurship within the public sector would be discussed with these questions in mind.

3.3 PUBLIC INTRAPRENEURSHIP

3.3.1 Definition of public intrapreneurship

Zampetakis and Moustakis (2007: 21) postulate that entrepreneurship exists in all public organisations irrespective of size or type. The authors have put forth the following definition of public intrapreneurship: “the generation of a novel idea and the design and implementation of the innovative idea into public sector practice ...” The definition is supported by Llewellyn and Jones (2003: 247) who argue that public intrapreneurship can be classified according to the dimensions of service innovation, innovative ways of service delivery and new venture creation.

According to Morris and Jones (1999: 71), public intrapreneurship includes the quest to render a more effective and efficient service by utilizing resources in innovative ways. By doing so, value is created for citizens. Morris and Kuratko (2002: 305) state that re-engineering, re-inventing government and downsizing are terms used these days in association with public sector entrepreneurship.

3.3.2 Factors contributing to the creation of an intrapreneurial climate in the public sector

Borins (2000: 498) maintains that most innovation in the public sector originates from internal organisational problems, driving the process. This confirms findings reported by Littunen (2000: 301) that situational elements may influence the activation of individual entrepreneurial behaviour within public sector organisations. The importance of innovation as common denominator in creating an intrapreneurial climate is thus emphasised – similar to findings of studies on intrapreneurship in the private sector.

Boyet (1997: 90) posits that public sector entrepreneurship becomes prevalent when there is a combination of an uncertain environment and devolution of power to unit management level. The importance of devolution of power or “entrepreneurial autonomy” is supported by Bellone and Goerl (1992: 131). The authors claim that public

sector entrepreneurs seek more autonomy to manage their budgets and to source additional funding.

Analogous to what was found in studies on intrapreneurship within the private sector Morris and Jones (1999: 71) propose the importance of exploiting opportunities in public sector intrapreneurship. Morris and Jones furthermore argue that this should be an ongoing process that results in generating new revenue sources.

Many similarities exist between intrapreneurship in the private sector and the public sector. Differences occur mainly due to sector-specific variables and constraints. How would these differences and similarities shape the profile of the individual intrapreneur in the private and public sector respectively? Would there be differences in their characteristics and motivating forces that drive behaviour patterns? In section 3.6 an exposition is given of the literature study results on this theme.

3.4 INTRAPRENEURIAL CLIMATE

In this section the nature of the intrapreneurial climate is discussed. Emphasis is placed on the various constructs that comprise an intrapreneurial climate and their importance in the fostering of an intrapreneurial climate within institutions.

3.4.1 Role of corporate culture and climate in fostering intrapreneurship

Kreitner and Kinicki (2004: 81) define corporate culture as shared values and beliefs that lie beneath the identity of an organisation. One of the functions of organisational culture as put forward by the authors is to assist employees to make sense of their surroundings, thus shaping their behaviour patterns (Kreitner & Kinicki, 2004: 87). This view is supported by Cummings and Worley (2005: 662). According to Morris and Kuratko (2002: 255), corporate culture encompasses inter alia values, artifacts, rituals, myths and stories of the organisation.

The role of culture and managerial style in fostering intrapreneurship have been emphasised by various authors (Ireland, Kuratko & Covin, 2003: 1; Barringer & Bluedorn, 1999: 425).

Ireland *et al.* (2003: 1) assert that intrapreneurship is not located at one level or place within the organisation, but is ingrained within all levels, forming part of the core culture. This view is supported by Barringer and Bluedorn (1999: 425). Their research investigates the concept “locus of planning” and the involvement of employees in planning activities. Barringer and Bluedorn furthermore maintain that a deep locus of planning involves all hierarchical levels in the organisation and denotes a high level of teamwork and participation as in contrast to “shallow planning” whereby planning activities are mainly executed by senior managers. Deep locus of planning results in diverse viewpoints being heard and the opinions obtained of employees that work closely with customers. Opportunities are thus recognised, lessening the danger of good ideas being overlooked (Barringer & Bluedorn, 1999: 425).

Timmons and Spinelli (2007: 540 - 541) state that corporate climate is created by the expectations of employees as well as attitudes and practices of key managers. The authors identify six basic dimensions of corporate climate:

- The degree of clarity that exists within an organisation in terms practices and procedures;
- The degree to which high standards are expected and enforced within the organisation;
- The level of commitment among employees towards company goals and objectives;
- The extent to which employees take responsibility for their own accomplishments;
- The extent to which recognition and rewards are given for good performance; and
- The team spirit that exists within an organisation.

3.4.2 Constructs of an intrapreneurial climate

According to Hisrich *et al.* (2005: 45), an intrapreneurial climate favours innovation, creativity and experimentation. Nine factors need to be operant in establishing an intrapreneurial climate within organisations, i.e. encouragement of new ideas, organisations making use of latest technology, tolerance for failure, experimentation allowed, no limitations regarding opportunities, accessible resources, teamwork, management taking a long term view, existence of a volunteer programme, an existing

reward and recognition system, availability of champions and finally support by top management (Hisrich *et al.*, 2005: 48).

Van der Merwe and Oosthuizen (2008: 7) refer to four instruments developed by scholars with the aim to establish a corporate intrapreneurial climate within organisations. Table 3.2 depicts the instruments.

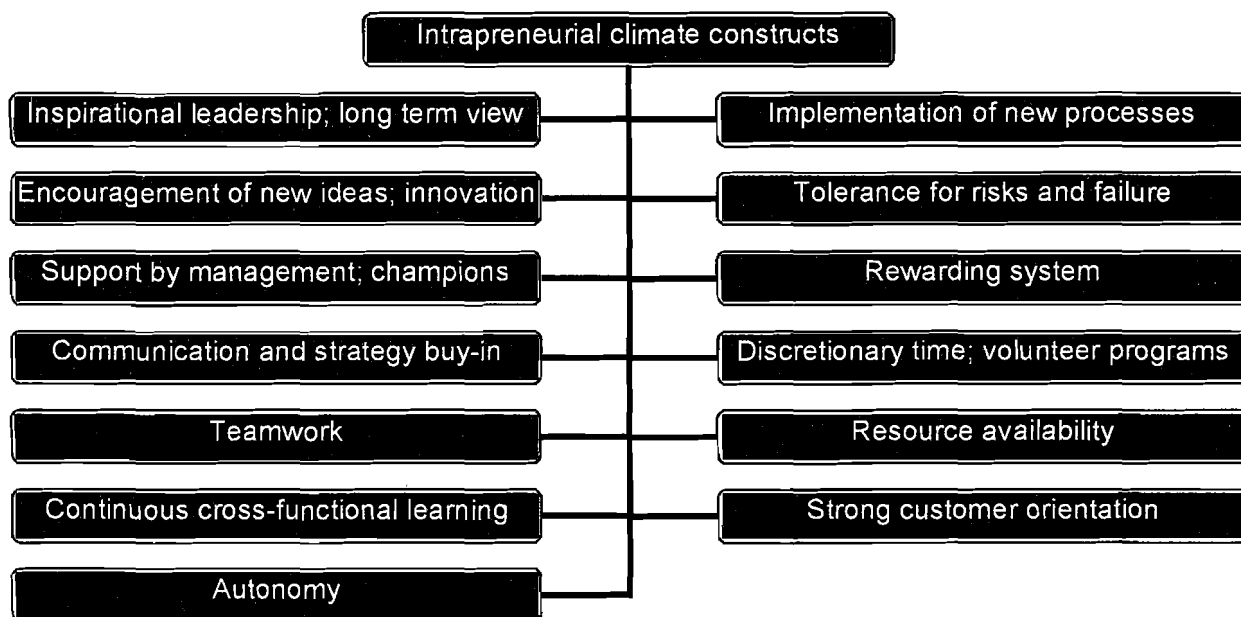
Table 3.2 Instruments to establish corporate intrapreneurial climates

Instrument	Scholar(s)
The Entrepreneurial Performance Index (EPI)	Michael M. Morris
The Intrapreneurship Assessment Instrument (CEAI)	Donald F. Kuratko, Jeffrey S. Hornsby and Ray V. Montangno
The Innovation Climate Questionnaire	Gifford Pinchot
The Litwin and Stringer Organisational Climate Questionnaire (LSOQC)	Litwin and Stringer

Adapted from Van der Merwe and Oosthuizen (2008: 7)

Based on the above-mentioned instruments as well as comprehensive research conducted, Van der Merwe and Oosthuizen (2008: 8) proposed that an intrapreneurial climate comprises 13 constructs or dimensions which are highlighted in figure 3.2.

Figure 3.2 Constructs of a corporate intrapreneurial climate



Source: Adapted from Van der Merwe and Oosthuizen (2008: 8)

- **Inspirational leadership and the long term view**

Inspirational leadership is future-oriented. Hisrich *et al.* (2005: 50) contend that an intrapreneurial leader “dreams great dreams” and has the capability to articulate the dream in such a manner that his team will follow – irrespective of obstacles in the way. Timmons and Spinelli (2007: 541) argue that entrepreneurial leadership is based on expertise and not authority. The authors furthermore maintain that the entrepreneurial leader has a good understanding of the relationships within teams and does not enforce his or her ideas on the team. Instead an approach of consensus building among team members is utilized.

Hisrich *et al.* (2007: 50) emphasise the importance for a leader to understand the environment he is operating in. This view is supported by Barringer and Bluedorn (1999: 422) who are of the opinion that for an institution to be innovative, risk-taking and pro-active, it is imperative to employ high level environmental scanning processes. In this way the institution is able to gather and analyse information that would inform

innovation strategies. Scanning of the environment assists managers to cope with uncertainty and it may lower the risk of an entrepreneurial venture, encouraging the firm to continue with the project. Stevenson and Jarillo (1990: 19) furthermore argue that environmental scanning enables the intrapreneur to gain superior knowledge that could be used to his advantage.

Prior knowledge augments pro-activeness that includes the ability to anticipate changes in market needs and making pre-emptive moves. The organisation is thus enabled to act forcefully in order to improve its market position (Hitt, Ireland, Camp & Sexton, 2002: 7). The benefits of pro-active behaviour patterns in the creation of competitive advantages are supported by Barringer and Bluedorn (1999: 422) and Sarkar, Echambadi and Harrison (2001: 702). The ability to recognize opportunities and act on them pro-actively is identified as a key enabler of intrapreneurship by Barringer and Bluedorn (1999: 422).

An entrepreneurial leader successfully establishes a culture of high performance within an organisation. This culture is also called a “performance anatomy” by Thomas, Harburg and Dutra (2007: 1). It is divided into three components, namely mindsets, practices and results. Aligned mindsets result in operational practices that lead to outstanding results and outcomes in the organisation.

In order to achieve a performance anatomy, leaders must have a dual focus on the present and the future. They must understand the importance of maintaining best practices of the past, but must also be willing to sponsor necessary renewals. Furthermore, they should invest time and money in recruiting and developing employees with an entrepreneurial mindset. An entrepreneurial leader recognises the importance of investing in technology to improve business performance. Finally, in a performance anatomy, results are measured and successes celebrated (Thomas *et al.*, 2007: 2).

- **Support by management**

Managers play a crucial role in establishing and maintaining an intrapreneurial spirit within an organisation – irrespective of the sector. Harvard professor Howard Stevenson notes that “entrepreneurial management may be seen as a mode of management” and as such different from the concept of traditional management. Stevenson contrasts entrepreneurial “promoters” to administrative “trustees” in a strategic sense whereby promoters are driven by exploiting opportunities and trustees by the control of available resources (Brown, Davidson & Wiklund, 2001: 954).

Goosen, De Coning and Smit (2002b: 21) developed a ‘key factor’ intrapreneurship instrument based on the ENTRESALE to measure intrapreneurship. The instrument consists of three factors of which two (innovativeness and proactiveness) focus externally and one (management) focuses internally. The internal factor represents influence of management on intrapreneurship. The management building block consists of ten dimensions as highlighted in table 3.3.

Table 3.3: The ten dimensions of management’s influence on intrapreneurship:

Dimensions of managerial influence on intrapreneurship
Inclusion of intrapreneurial practices when objectives are set
Rewarding systems that promote creativity and innovation
Capital is made available in advance to kick-start intrapreneurial efforts
Open communication channels and flat organisational structures
Management champions intrapreneurship
Intrapreneurial freedom whereby employees are encouraged to express their ideas and are taken seriously by management
Fostering a problem-solving culture
Staff is empowered; they are trusted and are allowed to feel part of the creative process. They are allowed to fully unlock their personal knowledge and capabilities within the organisation

Source: Goosen, De Coning and Smit (2002b: 21)

Managers who are successful in establishing an intrapreneurial culture, act in an intrapreneurial way first and foremost themselves (Anon., 2008b: 1). These managers ensure the sharing of information and knowledge throughout the organization and encourage employees to work together in cross-divisional teams. Networks with other

organisations are established and they encourage employees to do likewise. The importance of the role of business units within the mother company is recognised and employees are allowed to form smaller, more responsive units (Anon., 2000: 190).

Pedersen and Hartley (2008: 336) contend that public sector managers who encourage intrapreneurship “communicate strategically”. These managers include a multiplicity of stakeholders in their deliberations in order to ensure transparency. Managers furthermore focus the attention of stakeholders on the inherent value of the strategic objective at hand whilst at the same time encourages contributions from team members and individual employees in how to attain the objective (Jacobs & Kruger, 2001: 5). A working environment conducive to entrepreneurial behaviour is provided which entails inter alia a climate that allows employees to take calculated risks and make mistakes. Failure is thus tolerated (Anon., 2000: 190).

- **Implementation of new processes and innovativeness**

The ability of an organisation to be innovative has become imperative for success in the contemporary market place (Robinson, 2001: 95). Timmons and Spinelli (2007: 13) support this argument and maintain that high levels of uncertainty and rapid changes which are characteristics of the global business world require of organisations to be creative and able to respond quickly to changed circumstances. By challenging existing beliefs and practices within the organisation, the intrapreneur is able to create something new (Hisrich *et al.*, 2005: 50). In order to boost overall organisational innovation it is necessary to draw on the creativity of all employees and their familiarity with customer needs and competitors’ actions (Oosthuizen, 2006: 246).

According to Zhao (2005: 27), innovativeness is multi-dimensional. Three main categories are identified:

- Radical versus incremental innovation;
- Product versus process innovation; and
- Technological versus administrative innovation.

Radical innovation refers to taking quantum leaps while incremental innovation on the other hand, involves small modifications or improvements. At 3M innovation has been achieved with the aid of both radical and incremental changes (Robinson, 2001: 96). Product innovation results in a new end product, whereas process innovation entails new processes. Technological innovation refers to the adoption of new technology that impacts on outputs and administrative innovation has to do with organisational changes (Dhliwayo, 2007: 107).

Schumpeter emphasises the significance of “carrying out of new combinations” that form the core of entrepreneurship; be it new products, services or markets (Stevenson & Jarillo, 1990: 17). This view is supported by Bhardwaj and Momaya (2006: 37). The authors posit that intrapreneurship entails more than the mere forming of new ventures. It also refers to activities such as new product development, the implementation or development of new technologies and innovative administrative strategies that encompass the entire culture of the institution.

Robinson (2001: 98) states that organisations need to decide whether innovation would be implemented by means of formal or informal processes. According to Jacobs and Kruger (2001:10), the implementation of new processes can result in one of three outcomes:

- Implementation is executed effectively resulting in enhanced organisational performance, the strengthening of the implementation climate and increased managerial support. Eventually this will lead to improvements in implementation policies and procedures.
- Implementation of new processes is effective, but the innovation does not enhance the performance of the organisation resulting in a decline in the implementation climate.
- Implementation fails and the implementation climate within the organisation weakens. In response to the failed attempt, if innovation is still supported by management, changes would be made to the implementation policies and procedures to sustain the process better.

Successful implementation of new processes should not be inhibited by “opportunity parameters” whereby divisions are protective towards their own territory (Hisrich *et al.*, 2007: 48).

Van der Merwe and Oosthuizen (2008: 17) propose that innovation should be included in leadership development programmes and that employees should be encouraged to be creative. Top management must reinforce innovative behaviour patterns by providing the necessary support, rewards and recognition to intrapreneurial employees (Morris & Jones, 1999: 76).

- **Tolerance for failure and ability to take risks**

Entrepreneurs are able to tolerate risk and ambiguity (Timmons & Spinelli, 2007: 12). In the process of developing innovative products or services, some failures necessarily will occur. Morris and Jones (1999: 76) are of the opinion that top management should emphasise the fact that mistakes would be tolerated within the organisation in the quest for creativity and improved service delivery. Hisrich *et al.* (2007: 48) support this view by proposing that an intrapreneurial spirit can only be sustained if the internal business environment allows for new mistakes to be made. However, as stated by the CEO of 3M, management should expect that intrapreneurs learn from their mistakes (Anon., 2000: 184).

Morris and Jones (1999: 76) maintain that top management must foster the belief that entrepreneurial behaviour is valued and appreciated and give re-assurance to employees that project failure does not involve unacceptably high personal risks. Employees should be encouraged to take “intelligent” business risks without risking their careers (Anon., 2000: 190). In order to achieve that end, leaders need to create a mindset within the organisation that encourages breakthrough thinking and change.

Van der Merwe and Oosthuizen (2008: 16) posit that employees should be allowed to take calculated risks. Sharing risks and rewards with employees is regarded by the authors as fundamental to intrapreneurial behaviour.

- **Presence of champions**

According to Oosthuizen (2006: 279), sponsors or champions form an important connection between top management and intrapreneurs within the organisation and act as mentors to innovators. A champion can ease the negotiation process in order to get buy-in and support from top management. Van der Merwe and Oosthuizen (2008: 14) affirm that a shortage of influential managers that assist and support intrapreneurs to get their work done, can negate the process of establishing intrapreneurship in an organisation.

Sathe (2003: 182) contends that an intrapreneur should build support for his venture on three levels, i.e. line management, top management and divisional groups. The more powerful the champion network the innovator manages to build, the greater the support for the venture.

- **Reward and recognition system**

In order to encourage intrapreneurship employees should be appropriately recognised and rewarded in relation to their job performance and the value added to the organisation (Van der Merwe & Oosthuizen, 2008: 17). This view is supported by Jacobs and Kruger (2001: 5) who are of the opinion that the evaluation system used to measure performance plays an important role in reinforcing intrapreneurial behaviour.

Timmons and Spinelli (2007: 299) argue that the following aspects should be considered when implementing a rewarding system:

- Differentiation: team members should be rewarded in relation to their contribution;
- Performance: reward should be a function of the level of individual performance; and
- Flexibility should be built into the reward system due to the fact that the changes occur on a continuous basis in the operational environment of the organisation, with concomitant changes in the organisation.

The importance of an appropriate compensation structure is emphasised by Kuratko *et al.* (2001: 62). The authors maintain that the type of compensation system implemented has a greater influence on encouraging entrepreneurial behaviour than the actual amount of compensation paid. A remuneration system comprising a mixture of fixed salary and incentives is more effective to enhance performance than does a single kind of compensation. Hisrich *et al.* (2007: 49) put forward that rewards should be based on the attainment of performance objectives and propose an equity position in a new venture as possibility to reward intrapreneurs.

- **Communication and strategy buy-in**

Strategic entrepreneurship is the integration of opportunity seeking actions and advancement seeking actions into wealth creating strategies (Sathe, 2003: 2). It is the responsibility of top management to ensure that a clear and common purpose as articulated in an intrapreneurial strategy is communicated to all employees and especially to middle managers (Van der Merwe & Oosthuizen, 2008: 17). Gupta, MacMillan and Surie (2004: 244) emphasise the importance of an effective communication system within the organisation to encourage intrapreneurial behaviour patterns. Furthermore, intra- organisational communication should bolster the significance of a shared value system (Hitt *et al.*, 1999: 148).

Inputs into the strategic process should be obtained from employees at all levels within the organisation (Anon., 2008b:1). This would give employees the confidence and freedom to exploit intrapreneurial ideas since they are aware of the parameters and it would reinforce the message that intrapreneurship is a collaborative activity.

According to Oosthuizen (2006: 237), visionary leadership coupled with a continuous learning culture and high performance standards would support the fostering of an intrapreneurial climate within organisations.

Discretionary time and volunteer programmes

An intrapreneurial spirit and attitude should be voluntary; thus employees should not be forced to partake in intrapreneurial activities (Hisrich *et al.*, 2007: 49). Sufficient time should be set aside for intrapreneurs to work on their ideas. At 3M researchers are allowed to spend 15% of their working time on “skunk works” projects that are spearheaded by them without approval from management (Anon., 2000: 184). In skunk work projects intrapreneurs are left to their own devices. This implies a high level of trust in the relationship between management and intrapreneurs (Anon., 2000: 184).

- **Teamwork**

Intrapreneurship does not necessarily require that any one person, not even the leader, does possess the entire set of entrepreneurial characteristics. Instead, they could be found throughout the organisation as people collaborate on developing ideas in new-venture teams, contributing their intrapreneurial expertise whenever needed. The leader must ensure that the entire workforce realizes the benefits of intrapreneurship and know how to act accordingly (Anon., 2008a: 1).

Kuratko, Ireland and Hornsby (2001: 61) emphasised the importance of new-venture teams that result in so-called “collective entrepreneurship” in which the benefits of synergy are obtained. Effective new-venture teams take responsibility for their own activities and share their knowledge within the group thus increasing the likelihood of developing successful innovative products and services.

Diversity of thinking and the development of new ideas that challenge conventional way of doing things are encouraged. Recruitment processes emphasize the attaining of a diverse workforce that would allow organisations to respond better to the needs of complex markets. This is supported by Sadler (2000: 31), who argues that diversity in various specialisation fields promotes innovation due to cross-pollination of ideas.

The forming of intra-organisational networks, both formal and informal, encourages intrapreneurial behaviour within organisations (Stevenson & Jarillo, 1990: 25). Intra-departmental networks result in sharing of resources and knowledge. Morris, Davis and Allen (1994: 73) weigh the benefits and constraints of individualism and collectivism in terms of intrapreneurship. In their opinion, individualism refers to behaviour patterns in which self-sufficiency, control and the pursuit of individual goals are emphasised. Own accomplishments are sources of pride, not group achievements. On the other hand, in collectivism the goals of the group are emphasised and the individual's interest is subordinate to that of the group. Collaboration, consultation and teamwork are preferred modes of operation. The welfare of the group is paramount and the group as an entity receives rewards (Morris *et al.*, 1990: 67).

It is argued that a balance must be struck within an organisation between these two concepts, since both extremes would be counterproductive to intrapreneurship. The authors conclude that "the key is to balance individual initiative with the spirit of cooperation and group ownership of innovation" (Morris *et al.*, 1994: 84).

- **Resource availability**

In order to create a climate conducive to intrapreneurship, sufficient resources should be available and easily accessible (Hisrich *et al.*, 2005: 48). Timmons and Spinelli (2007: 341) identify four types of resources, i.e. human capital, financial resources, assets and a business plan. However, it is not necessary to have all the resources in place prior to commencement of the innovation process. According to Timmons and Spinelli (2007: 91), an intrapreneur can get by with "bootstrapping", i.e. doing more with less.

Hisrich *et al.* (2005: 426) furthermore state that an important entrepreneurial resource is the knowledge and ability to obtain resources and then recombine them into a "bundle" that is scarce, indispensable and unique. This knowledge is vested in intrapreneurial employees and is acquired over a period of time; thus making it difficult for competition to imitate.

- **Continuous cross-functional learning**

When knowledge is effectively managed in an organisation and employees are allowed to develop and maximise their entrepreneurial potential, a climate is created conducive to intrapreneurial behaviour (Anon., 2008a: 1). The author contends that an effective knowledge-sharing system should be in place that includes benchmarking, thus allowing the organisation to learn from its successes and failures.

Robinson (2001: 96) argues that intrapreneurship drives knowledge creation, the development of new competencies and the modification of existing ones. The author furthermore states that new knowledge lays the foundation on which the organisation can build a competitive advantage.

To facilitate continuous cross-functional learning, sufficient learning opportunities should be provided to employees and they must be encouraged to stay abreast of new developments in their specific fields. Furthermore cross-functional knowledge sharing should be promoted (Van der Merwe & Oosthuizen, 2008: 15). The importance of cross-functional teamwork and resource sharing is thus emphasised. Cross-functional project teams should be allowed autonomy to make decisions and act on them without having to ask for permission. This implies that mandates are clearly spelled out by top management and thereafter interference should be limited.

- **Strong customer orientation**

In order to establish intrapreneurship in an organisation, it should develop ways to come close to its customers, thus creating a strong consumer orientation (Hisrich *et al.*, 2005: 51). Resources should be made available to keep track of consumers' needs, preferences and changes in buying behaviour. Consumer databases, sales persons' records and reports, retailers' opinions and complaints received can be used to track consumer behaviour patterns and to forecast trends.

- **Autonomy and organisational structure**

Echols and Neck (1998: 39) contend that the organisational structure of a company plays a crucial role in fostering an intrapreneurial climate. Traditional hierarchical organisational structures tend to be rigid and inflexible and are not suitable for contemporary entrepreneurial enterprises (Dess *et al.*, 1999: 91). Van der Merwe and Oosthuizen (2008: 18) assert that an entrepreneurial organisational structure should be flat with open communication channels. This view is supported by Oosthuizen (2006: 254) who argues that an entrepreneurial organisational structure should allow for a free-flow of ideas and facilitate the process of employee empowerment.

Hisrich and Peters (2002: 330) note that decentralisation, flexibility and the absence of inhibiting rules and regulations are typical features of the organisational structure prevalent in an entrepreneurial organisation. Dhliwayo (2007: 112) maintains that a network-oriented organisational structure is more suited than a hierarchical structure in encouraging innovativeness. Covin and Slevin (1991:18) note that an entrepreneurial structure is built around decentralisation of decision-making authority, minimal hierarchical levels and free-flowing communication channels.

In section 3.5 the dynamics of the public sector and the influence of sector-specific variables on the establishment of intrapreneurship therein would be emphasised.

3.5 FACTORS INFLUENCING THE ESTABLISHMENT OF INTRAPRENEURSHIP IN THE PUBLIC SECTOR

3.5.1 The operational environment

The operational environment of the public sector differs from that of the private sector regarding objectives, obligations and accountabilities. However, on the surface there exist commonalities between public intrapreneurship and intrapreneurship in large corporations (Morris & Jones, 1999: 73). Common characteristics include well-established cultures; steep hierarchical structures and processes that are embedded in fixed policies and procedures.

Sadler (2000: 26) indicates that private sector entrepreneurship models have been equated with management practices in the public sector, largely ignoring the differences between the two sectors. Managers in the public sector have to deal with political pressures and public scrutiny. A multitude of diverse social and political objectives guide management plans and decision-taking processes typically take long, since public sector managers have to consult and reach consensus with a variety of constituencies.

Consequently public sector managers are faced with an increasing complex environment, grappling with multiple and often competing expectations, demands and strategic dilemmas (Pedersen & Hartley, 2008: 333). Pedersen and Hartley distinguish several paradoxes that influence management in the public sector and shape their reality. In table 3.4 some of these paradoxes are singled out.

Table 3.4 Paradoxes that exist within the public sector

Paradox			Influence on management within public sector
Centralised re-regulation and governmental interventions	versus	Increase in self-regulation by means of decentralization, deregulation and forming of partnerships	Emergence of new modes of governance, i.e. context governing – by means of pressures, stakeholder expectations, evaluations, obligations towards partners.
Governmental encouragement to innovate practices and service delivery	versus	Institution bogged down by regulations and rules	Challenge to be innovative within the constraints of regulations
National government's emphasis to be responsive to various local needs	versus	National standards laid down regarding levels of service delivery, e.g. content of education courses	Challenge to organisation in how to adapt to local needs within frameworks of standards
National pressure to improve on service delivery	versus	Lack of resources – physical, financial and Human Resources	Emphasis to be placed on effective utilization of resources; resource-sharing; diverse modes of obtaining resources
National emphasis on consultation with communities	versus	Ongoing centralised control over processes	Challenge on how to use decentralisation to the advantage of the institution within the constraints of national control measures

Source: Pedersen and Hartley (2008: 332)

The paradoxes featured in table 3.1 pose a challenge to public sector managers on how to maintain their “management legitimacy” taking into consideration the political context within which they operate (Pedersen & Hartley, 2008: 334). A duality exists in the public sector regarding decision making authority, the determination of strategic objectives and setting of operating standards. Consequently a struggle arises between different levels of government over the location of managerial authority, the right to make decisions and the level of autonomy that could be exerted in individual departments or organisations

(Pedersen & Hartley, 2008: 335). This raises the question on what role public sector managers can play in creating an environment conducive to intrapreneurship.

For high levels of intrapreneurship to be established and maintained within an organisation, congruency must exist between its culture and the principles underlying intrapreneurship as well as sector-specific demands and expectations. If the organisational culture embraces innovation, risk-taking behaviour, autonomy and emotional commitment from managers and employees alike, chances are good intrapreneurship would flourish within the organisation (Morris *et al.*, 1994: 70).

3.5.2 Trigger factors to public intrapreneurship

The following trigger factors to public intrapreneurship have been identified:

- Access to information

Zampetakis and Moustakis (2007: 19) find evidence that a positive correlation exists between the level of entrepreneurial behaviour revealed by public servants and their having access to information.

- Support by management

Support rendered by management increased the level of public intrapreneurship (Zampetakis & Moustakis, 2007: 19). Public sector management should put measures in place to increase the support rendered to employees.

- Devolution of power

This refers to freedom from excessive rules and regulations. Public sector intrapreneurs want discretionary powers to decide how money should be spent based on what is important to the department or institution they belong to. In order to grant public sector intrapreneurs this freedom, the way in which financial accountability is measured within

the public sector would have to change from inputs to outputs or results (Bellone & Goerl, 1992: 131).

Devolution of decision making powers from the central government to local government would result in a greater degree of managerial autonomy. This is singled out as a stepping stone to public service reform. The decentralisation process would lead to a greater level of participation of citizens in setting service standards for public enterprises (Pedersen & Hartley, 2008: 329).

- Sharing of risks

Public sector intrapreneurs work with public funds and that poses a dilemma whenever he/she needs to make a decision that includes risk. How could intrapreneurial risk-taking behaviour be reconciled with the stewardship role of the public servant? Bellone and Goerl (1992: 132) argue that risk-taking behaviour would be more congruent with stewardship if stakeholders discuss and accept the risk in making a particular decision. This calls for teamwork among stakeholders and the forming of networks.

- Coalition crafting and forming of partnerships

Morris, Davis and Allen (1994: 65) contend that the corporate entrepreneur must be adept in both political lobbying in order to get a champion, as well as crafting coalitions within the institution. He/she must be able to build teams and work through others. This is also applicable to the public sector entrepreneur.

Pedersen and Hartley (2008: 331) put forward the important role of forming partnerships between different tiers of government – from local to national and even international. These can take on various forms:

- Lateral partnerships (e.g. between the local municipality and local educational institutions);
- Vertical partnerships that comprise working together between levels of government;
- Vertical multi-level partnerships that can include international partners as well; and

- Opportunity driven.

Analogous to what was found in studies on intrapreneurship within the private sector, Morris and Jones (1999: 71) propose the importance of exploiting opportunities in public sector intrapreneurship. They argue that this should be an ongoing process that results in generating new revenue sources.

Brown, Davidson and Wiklund (2001: 955) link management style within organisations with the intrapreneurial culture that would exist within. According to them, a manager with an intrapreneurial focus would promote a broad search for opportunities and ideas that could be exploited. In contrast, the manager with an administrative focus would restrict opportunity search to the extent to which resources are available.

- Organisational climate

Drucker (1985: 170) indicates that the organisational structure and climate of the specific organisation are important determining variables of whether intrapreneurship or bureaucracy would be the preferred mode of operation. He claims that intrapreneurial behaviour is based on the vision of the organisation. Therefore it is reasoned that public sector intrapreneurs should share and communicate an informal vision about the organisation – where they want it to go. The vision would be based on the premise that the organisation is currently not achieving its potential and that it needs to change.

- Influence of the macro environment

An important finding by Zampetakis and Moustakis (2007: 22), especially for FET Colleges, is the fact that public sector reform takes place in situations of complexity and uncertainty that create stress. Under these circumstances some employees have felt the need to acquire new skills, to take initiatives for service improvement and to adopt a change mentality.

- Organisational structure

Osborne and Gaebler (1993) argue that government structures and functionality must be transformed from bureaucracy to entrepreneurial structures that are able to adapt rapidly and efficiently to change and have the capacity to innovate. Transformation in the public sector should be accomplished by a changing purpose, by incentives, accountability and corporate culture that support innovation. This would facilitate the creation of an entrepreneurial culture and mentality in the organization. An organic organisational structure which is more adaptable, has open communication channels and more dispersed power bases should be created. Little or no political intrusion is allowed (Sadler, 2000: 30). This can be achieved by the formation of business units within the mother company once the right strategic decisions are made. Seed money for internal ventures should be provided (Anon., 2008b: 1).

Research findings by Barzalay (1992: 40) indicate that an intrapreneurial climate in the public sector can be established by:

- A better understanding of customer needs;
- Employee participation in decision-making on issues that directly impact on them. Employees are treated as partners in the process and their inputs are valued;
- Increased discretionary authority and accountability to managers and employees alike; and
- Improved productivity by using up-to-date technology and techniques; as well as providing training for employees.

3.5.3 Barriers to establishing intrapreneurship in the public sector

The following barriers to the establishment of intrapreneurship in the public sector are highlighted:

- Politics and legislation

Bureaucratic structures and political philosophies of the past coupled with limited resources, impact negatively on the delivery of an effective service (Morris & Jones, 1999: 74). The structure and objectives of public organizations are dictated from external sources such as legislative bodies and authorities and impact negatively on managerial autonomy. Ambiguity of objectives exists within government departments and coupled with political intrusion, do not bode well for establishing an intrapreneurial mindset within the public sector (Sadler, 2000: 28; Borins, 1997: 288).

- Rigid systems

Managers in the public sector operate within a rigid system that governs cost allocations, recruitment and selection practices and employee rewards. Resources are allocated based on equity considerations and limitations are imposed by legislative or regulatory statute regarding the use of these resources. This results in high-risk endeavours being avoided since taxpayer monies are involved and it is difficult to measure the trade-off between risks and return (Morris & Jones, 1999: 73).

Public sector employees do not personally assume responsibility for financial risk; on the other hand the rewards they can receive for innovative practices have finite limits. The trade-off between taking risks and receiving rewards tend to favour the avoidance of mistakes; a factor that inhibits intrapreneurial behaviour among public sector managers. Sadler (2000: 28) argues that skewed reward systems and rigid salary scales further discourage risk-taking behaviour.

-

- Lack of strategic vision

Zampetakis and Moustakis (2007: 33) identify a lack of strategic vision and a focus on regulations, not achievements, as barriers to creating an intrapreneurial climate within the Greek public sector.

- Resistance to change and “turf” protection

Resistance to change and an employee focus, as opposed to a citizen focus, are other key causes for the failure to establish an intrapreneurial climate within the public sector (Borins, 1997: 288). The emphasis on operational efficiency in the public sector, a lack of confidence in the abilities of employees and a nervousness about a loss of control if too many employees become intrapreneurial, undermine intrapreneurship in the public sector (Anon., 2008a: 1). Borins (1997: 288) maintains that fighting for positions in the public sector negates the creation of an entrepreneurial mindset.

- Lack of skills and resources

In a study by Tordoff and Young (1994: 287) on decentralisation and public sector reform in Zambia, it was found that constraints to successful decentralisation of power and the creation of an intrapreneurial climate were a lack of skilled staff as well as a lack of resources.

Other barriers to the pursuance of entrepreneurship within the public sector include:

- Restrictive personnel policies which are counter-productive in creating a motivational climate within the organisation;
- Lack of competition;
- Lack of resource control; and
- Ongoing need to consult with stakeholders prior to decision-making (Sadler, 2000: 28; 32).

These barriers impact negatively on the establishment of intrapreneurship in the public sector. In section 3.7 strategies suggested by literature to overcome these constraints will be discussed.

Authors on entrepreneurial behaviour attribute particular characteristics to the individual entrepreneur. In section 3.6 these characteristics will be highlighted.

3.6 INDIVIDUAL CHARACTERISTICS THAT FOSTER ENTREPRENEURSHIP

The entrepreneurial mindset is about being opportunity obsessed, creative and innovative (Dhliwayo, 2007: 103). It allows the entrepreneur to make decisions in circumstances of uncertainty. According to Hitt *et al.* (2002: 2), the entrepreneur has a tolerance for uncertainty and risk. McGrath and MacMillan (2000: 1) argue that an entrepreneur has the ability to capture the benefits of uncertainty whilst exploiting a business opportunity. Morris and Kuratko (2002: 96) are of the opinion that an entrepreneur not only believes in change and innovation, but also develops his abilities and skills to bring about change.

McGrath and MacMillan (2000: 3) contend that entrepreneurs possess the following eight characteristics:

- They are opportunity driven;
- They are continuously scanning the market environment;
- They are disciplined in pursuing opportunities;
- They display pro-active behaviour patterns;
- They invest when it is the opportune time;
- They are selective when implementing opportunities;
- They think strategically; and
- They are team players and adept at forming networks.

Hisrich *et al.* (2005: 21) list seven entrepreneurial characteristics, i.e. internal locus of control; risk taking ability; innovative; persistent; change oriented; visionary leader and ability to manage change. Timmons and Spinelli (2007: 7) on the other hand, identify six dominant themes of desirable and acquirable entrepreneurial attitudes and behaviour patterns. Figure 3.3 brings them to light.

Figure 3.3 Desirable and acquirable entrepreneurial attitudes.

Attribute	Attribute	Attribute	Attribute	Attribute	Attribute
Commitment and determination ↓	Leadership ↓	Opportunity driven ↓	Risk and ambiguity tolerance ↓	Creativity and self-reliance ↓	Courage and strive towards excellence ↓
Manifests in: High levels of perseverance	Manifests in: Ability to inspire others	Manifests in: Ability to see opportunities in market place	Manifests in: Calculated risk taker	Manifests in: Being self-reliant	Manifests in: Low status and power needs
High levels of commitment (tenacity)	Good people judgement and team builder	Intimate knowledge of consumer needs	Ability to tolerate ambiguity and uncertainty	Quick learner	Being realistic
Being disciplined	Being generous and fair	High levels of creativity and innovativeness	Problem solving skills	Self-confidence	High levels of emotional intelligence
High energy levels	Having integrity	Able to adapt to changes	Tolerance of failure	Low support needs Ability to take responsibility	Courageous Patience

Source: adapted from Timmons and Spinelli (2007: 9)

3.6.1 Commitment and determination

An entrepreneur has the ability to overcome many obstacles and is willing to make personal sacrifices in his quest to realise his dream. Total commitment to the venture is required to be able to handle the levels of pressure experienced by an entrepreneur. Timmons and Spinelli (2007: 8) furthermore argue that an entrepreneur should be tenacious, disciplined and must possess high levels of energy. Van der Merwe (2003: 11) contends that entrepreneurs are determined to attain their goals and do not give up easily. They overcome hurdles and are able to commit quickly.

3.6.2 Leadership abilities

This manifests in the ability to inspire others, to being generous and fair and having good people judgement. Timmons and Spinelli (2007: 8) state that an entrepreneurial leader is honest and has integrity and high standards. Successful entrepreneurial leaders are patient and possess excellent knowledge of their customers and the marketplace in which they operate.

3.6.3 Opportunity obsession

Hisrich *et al.* (2005: 7) argue that innovation and newness form an integral part of entrepreneurship. An entrepreneur goes against the status quo and creates value by combining and reorganising resources in new ways. The entrepreneurial makeup furthermore comprises the ability to identify opportunities and creatively combine resources in order to capitalise on them and in the process reaps rewards such as independence and personal satisfaction (Anon., 2008b: 1). According to Hisrich *et al.* (2005: 1), a considerable amount of time and effort is devoted to this process.

3.6.4 Risk and ambiguity tolerance

The concept of risk taking as key characteristic in entrepreneurship is emphasised in literature. Hisrich *et al.* (2005: 8) put forward that entrepreneurs have the necessary confidence and drive to assume financial, psychological and social risks, with the aim of reaping monetary and personal rewards.

3.6.5 Creativity and self-reliance

The entrepreneur believes in himself (Lambing & Kuehl, 2003: 26). He is a quick learner, has self-confidence and a low need for support. The entrepreneur furthermore has the ability to take responsibility and is assertive in his dealings with others.

3.6.6 Courage and strive towards excellence

Entrepreneurs have a low need for status and power and are motivated to excel in their endeavours. They are driven by a need for achievement (Timmons & Spinelli, 2007: 13). They possess high levels of emotional intelligence and understand their own

strengths and weaknesses. They are realistic in their expectations and positive in outlook on life.

The attributes and behaviour patterns listed in figure 3.4 can be learned and developed over a period of time (Timmons & Spinelli, 2007: 23). According to the authors, these behaviour patterns are applicable to all organisations, both large and small.

3.6.7 Characteristics of the public sector intrapreneur

Would it be safe to assume that these attributes would also be applicable to the public sector intrapreneur? Dhlwayo (2007: 129) defines individuals who generate, develop and implement innovative ideas in the public sector as public intrapreneurs. According to Ramamurti (1986: 143), the public intrapreneur is “. . . an individual who undertakes purposeful activity to initiate, to maintain or to aggrandise one or more public sector organisations”.

There is consensus among researchers that the pursuit of economic profit is not the driving force behind the public sector intrapreneur. Other factors such as career advancement, political re-election, and social recognition are motivators instead (Zerbinati and Souitaris, 2005: 61). Ramamurti (1986: 143) on the other hand, indicates that the public intrapreneur has similar characteristics to that of the private sector entrepreneur, namely self-confidence; self-motivation, innovative ideas and being a self-starter. Other common traits include creativity and innovation; opportunism; risk-taking; facilitating, synthesizing and the ability to persuade others.

Morris and Jones (1999: 75) argue that key characteristics of the public sector intrapreneur include the following:

- A mixture of power and achievement motivation;
- Strategic thinking abilities;
- Good networking skills- in the political as well as the external arena;
- The ability to take calculated risks;

- Having self-confidence; and
- The ability to tolerate ambiguity and to use it as a source of discretionary decision-making.

Characteristics peculiar to public intrapreneurs are identified by Morris and Kuratko (2002: 312):

- Profit is not the motivating force; instead they are driven by either political or social motives;
- Public intrapreneurs use public funding; thus transparency in service delivery is paramount;
- Public intrapreneurs have less market exposure than entrepreneurs in the private sector;
- Services rendered influences not only the immediate client, but also have consequences for others involved, e.g. education;
- The public intrapreneur has a multiplicity of constituencies that must be consulted; and
- The operating environment of public intrapreneurs does not tolerate failure and mistakes.

Public sector intrapreneurs are those individuals who are susceptible to the manipulation of their stakeholders, be it political or otherwise. Furthermore, they have a desire for social self satisfaction. They act as optimizing agents assessing the business environment for opportunities and manipulating incentives to followers in order to achieve the desired levels of dedication in exploiting these opportunities (Boyet, 1997: 77).

Zampetakis and Moustakis (2007: 24) could find no conclusive evidence that a positive correlation exists between gender and the display of public intrapreneurial behaviour. Male employees were not more intrapreneurially inclined than their female colleagues. Furthermore, their findings also indicate that employees with tertiary education were not more entrepreneurial than those without.

However, the study conducted by Zampetakis and Moustakis (2007: 24) did indicate that newly appointed employees tolerate change better than those with many years of service in the public sector. The main originators of public sector innovations in the US are middle level managers, functional area management and front line staff (Morris & Jones, 1999: 83). This view is supported by Zampetakis and Moustakis (2007: 24).

Although the public sector intrapreneur and his/her private sector counterpart have many characteristics in common, the context within which the public sector corporate entrepreneur operates differs from that of private sector. Attempts by governments to reform and modernise their public services, result in the creation of sector-specific paradoxes and tensions which have to be managed.

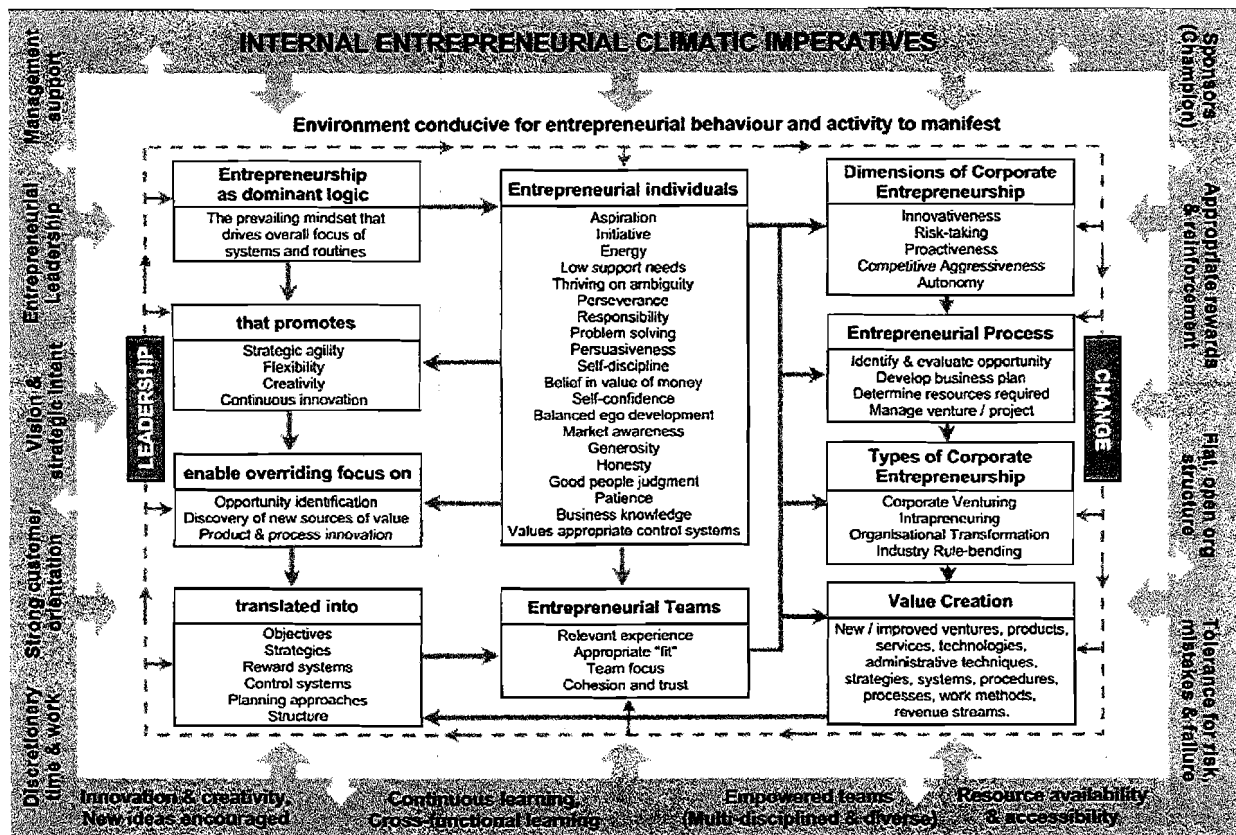
3.7 FRAMEWORK FOR ESTABLISHING INTRAPRENEURSHIP

The decision to adopt intrapreneurship in the organisation is a strategic choice (Jacobs & Kruger, 2001:1). A new strategic approach should be adopted in the organisation to facilitate this process. Dhliwayo (2007: 111) states that the strategy to foster intrapreneurship should allow for participation on all levels within the organisation.

Oosthuizen (2006: 269) puts forward a framework for the creation of an intrapreneurial climate within organisations. The framework comprises:

- Thirteen constructs (as discussed in 3.4) that impact on the organisational environment and which manifests in intrapreneurial behaviour patterns and types of intrapreneurship;
- Intrapreneurial individuals and teams that possess specific intrapreneurial characteristics;
- Intrapreneurship as a strategic choice and thrust; and
- Value creation as the ultimate goal.

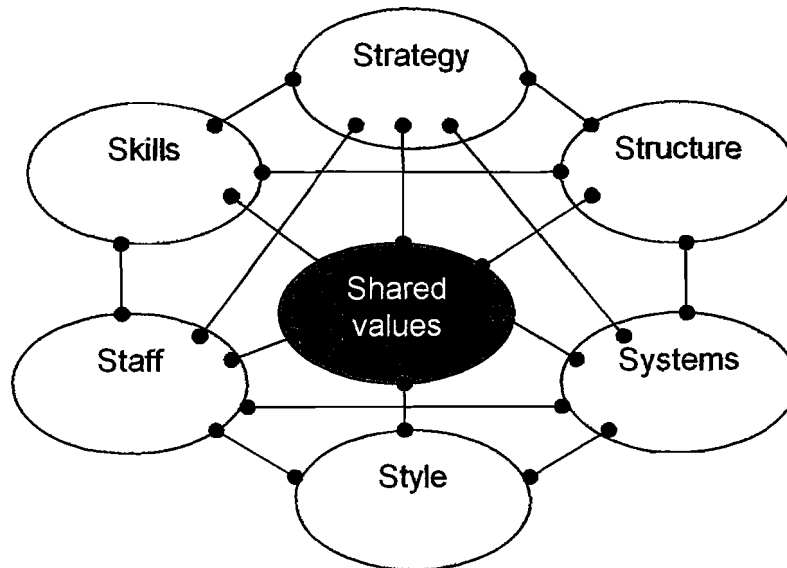
Figure 3.4 Integrated framework for intrapreneurship



Source: Oosthuizen (2006: 269)

Jacobs and Kruger (2001: 3) propose a model for strategically managing the establishment of an intrapreneurial orientation within an organisation. The authors make use of the McKinsey Seven-S model as a framework for developing and implementing the strategy. In the McKinsey model 49 characteristics of innovative firms are grouped together to form the "Innovation Inventory (IQI) test (Jacobs & Kruger, 2001: 3). In figure 3.5 the elements of the Seven-S framework are indicated.

Figure 3.5 Elements of the McKinsey Seven-S framework



Source: adapted from Jacobs and Kruger (2001: 10)

- **Strategy** refers to the blueprint of an organisation that indicates the course of action that would be taken and the manner in which resources would be allocated. It is the central thrust in how an organisation can attain and sustain a competitive advantage.
- **Structure** as indicated by the prominent features of the organisational chart and the way in which the units of the organisation relate to one another. Structure follows on strategy and facilitates the execution of the strategy. The structure has to be designed in such a manner that it includes the most critical activities to be performed in the organisation and facilitates decision-making and communication.
- **Systems** refer to procedures, processes and routines that characterise how the work should be done. They should be directly linked to the vision, mission statement and strategic plan of the organisation and support intrapreneurial behaviour patterns.
- **Skills** include unique capabilities of staff as a whole and the organisation should make provision for growth and learning opportunities to its employees which could eventually lead to the formation of core competencies.

- **Style** includes the managerial style, cultural style and the climate in the organisation indicating the “way we do things around here”. A participative management style is conducive to the adoption of intrapreneurship within an organisation.
- **Staff** – this concept refers to the demographic description of personnel in the firm, i.e. job designations; number of staff in each category and so forth.
- **Shared values** (also called superordinate goals) indicate what the organisation stands for and what it believes in. It forms the interconnecting centre in the McKinsey model (Jacobs & Kruger, 2001: 9,10).

3.8 SUMMARY

The main purpose of this chapter was to discuss findings of a literature review on intrapreneurship including various definitions, types and dimensions. Public intrapreneurship was discussed with special emphasis on defining the concept and highlighting factors influencing its establishment.

In order to foster an intrapreneurial climate within an organisation, the role of corporate culture and climate should be considered. Corporate climate is created by the expectations of employees as well as attitudes and practices of key managers. Six basic dimensions of corporate climate were identified.

An intrapreneurial climate comprises 13 constructs or dimensions, which include inter alia visionary leadership, managerial support, innovation, tolerance for failure, an appropriate reward system, teamwork and a strong customer orientation. These constructs should be present in order to implement an intrapreneurial climate in an organisation successfully.

The establishment of intrapreneurship within the public sector is possible, despite the many constraints inhibiting change. Various paradoxes exist within the operational environment of the public sector which influence managerial style and practices. Trigger factors that could facilitate the process were highlighted. They comprise inter alia access to information, support by management, sharing of risks and devolution power.

Barriers to the fostering of an intrapreneurial climate in the public sector consist of among others, the role of politics and legislation, rigid systems, the lack of strategic vision and the lack of resources.

Entrepreneurs possess specific characteristics that distinguish them from non-entrepreneurial individuals. Six main attributes were identified, i.e. commitment and determination, leadership abilities, opportunity obsession, risk and ambiguity tolerance, creativity and self-reliance and courage. Specific characteristics of the public intrapreneur were investigated and differences and similarities between public intrapreneurs and corporate entrepreneurs indicated.

Frameworks to facilitate the fostering of an intrapreneurial climate were looked into. In the framework as developed by Oosthuizen (2006: 269) the 13 constructs were combined with entrepreneurial characteristics, strategic intent and value creation as the ultimate goal. The seven-S model of McKinsey was proposed as an alternative framework for the fostering of intrapreneurship. In this model shared values form the connecting concept that brings together strategy, structure, staff; systems, skills and style in the organisation.

The following chapter entails the empirical study on the fostering of an intrapreneurial climate within public FET colleges in the Free State province. Data is analysed and the findings are discussed comprehensively. The findings of the empirical study accentuate the concepts discussed in the literature study.

CHAPTER 4

EMPIRICAL STUDY ON THE INTRAPRENEURIAL CLIMATE AT FOUR PUBLIC FET COLLEGES

4.1 INTRODUCTION

The intent of this chapter is to elucidate the results of the empirical study which was conducted to confirm and substantiate the outcomes of the literature review. The empirical study comprised the execution of a survey by means of a self-completion questionnaire that was distributed to respondents either by e-mail or in hard copy format. The questionnaire was adapted from a document originally developed by Oosthuizen (2006) and consisted of three sections. Apart from demographic information and a section on entrepreneurial characteristics, respondents had to indicate their perceptions on the intrapreneurial climate within the four public FET Colleges.

Refer to Annexure A for an example of the questionnaire.

Data collected during the survey was analysed by the Statistical Consultation Services of the North-West University (Potchefstroom campus). In this study frequency distributions will be portrayed graphically with the aid of histograms and bar charts. The mean will be employed as measure of central tendency and the standard deviation to indicate dispersion of data. Internal consistency is calculated by means of the Cronbach's alpha coefficient, whilst effect sizes as discussed by Ellis and Steyn (2003: 2), would be put to use to indicate differences of practical significance in entrepreneurial characteristics between managers at FET Colleges and their supervisors.

4.2 SAMPLING FRAME

In this study the survey population is made up of 145 lower, middle and senior managers at four public FET colleges in the Free State province of South Africa. The framework for the study entailed a name list of all the managers, whether acting or

permanently appointed in a post. These lists were obtained from the various Human Resource offices at the four colleges. These lists furthermore included the post levels of incumbents.

Levels of management at FET Colleges encompass:

- Top management salary band 12 to 14;
- Middle management salary band 10 to 11; and
- Lower management salary band 7 to 9.

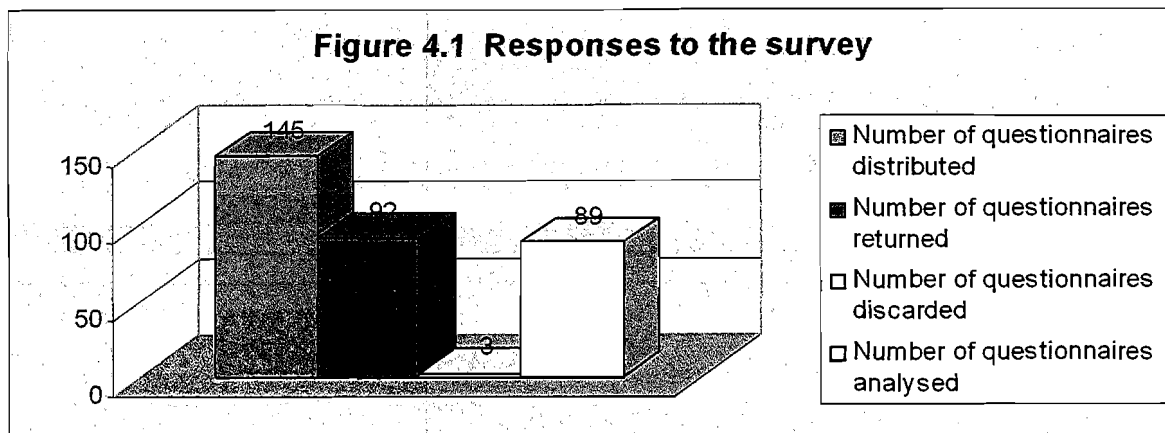
Respondents' functional divisions consist of general management, marketing, finance, human resources, student administration, student services, education and training, learnerships and skills, supply chain management, information technology and systems, quality management, health and safety, fundraising and sponsorships and finally a category "other".

It was decided to administer the questionnaire at the whole population, i.e. 145 managers based at four public FET Colleges in the Free State Province.

4.3 RESPONSES TO THE SURVEY

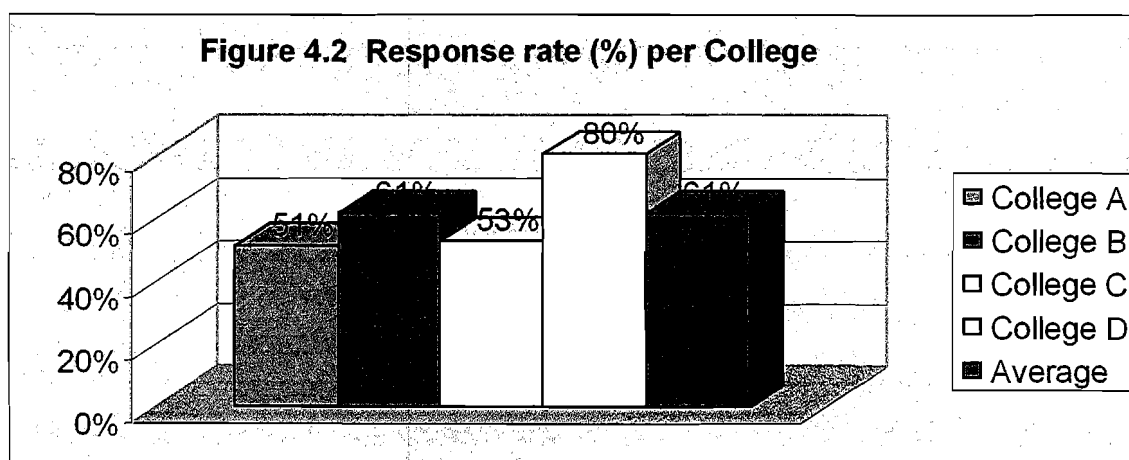
In figure 4.1 a graphical presentation is given of responses to the survey.

Figure 4.1 Responses to the survey



A total of 145 questionnaires were sent to respondents and 92 were returned by the cut-off date. Senior managers at the colleges supported the survey and encouraged respondents to participate in the study. Three questionnaires had to be discarded since those respondents completed only small parts of the questionnaire. Ultimately 89 questionnaires were analysed, although some non-responses also occurred on these questionnaires. However, due to the small population, it was decided to include all 89 questionnaires in the analysis. The response rate of managers at the various Colleges is indicated in figure 4.2.

Figure 4.2 Response rate (%) per College



The response rate per College was as follows:

- College A: 49 questionnaires were distributed and 25 were returned (51%);
- College B: 36 questionnaires were distributed and 22 were returned (61%);
- College C: 15 questionnaires were distributed and 8 were returned (53%);
- College D: 45 questionnaires were distributed and 36 were returned (80%); and
- The average response rate was 61%.

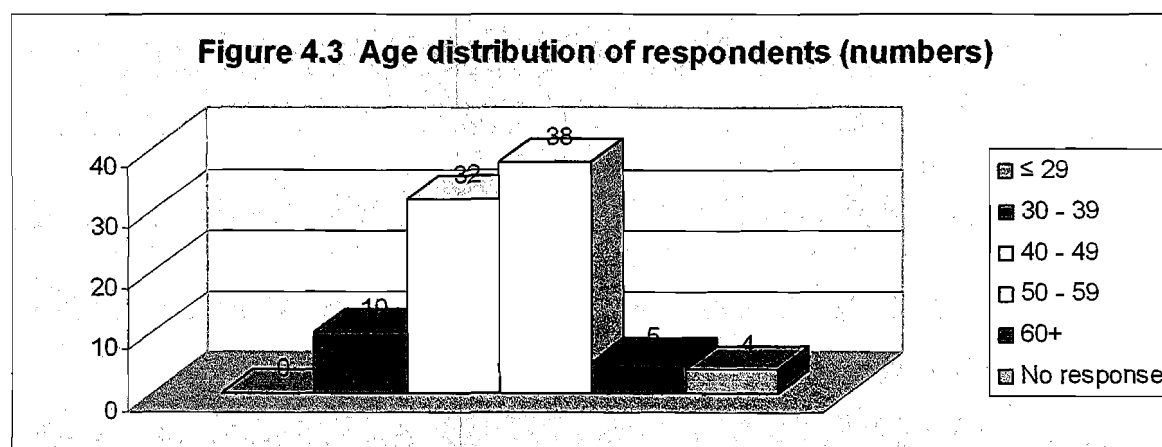
4.4 DEMOGRAPHIC INFORMATION OF RESPONDENTS

Demographic information of respondents regarding age, gender, racial group and highest academic qualification, as presented in section C of the questionnaire, is indicated below by means of histograms and frequency distributions.

4.4.1 Age distribution of respondents

The purpose of this question was to determine the age dispersion of respondents. They were requested to indicate their age group in one of five pre-determined intervals, i.e. ≤ 29 ; 30 to 39; 40 to 49; 50 to 59 and 60+. The age distribution is indicated in figure 4.3.

Figure 4.3 Age distribution of respondents (numbers)

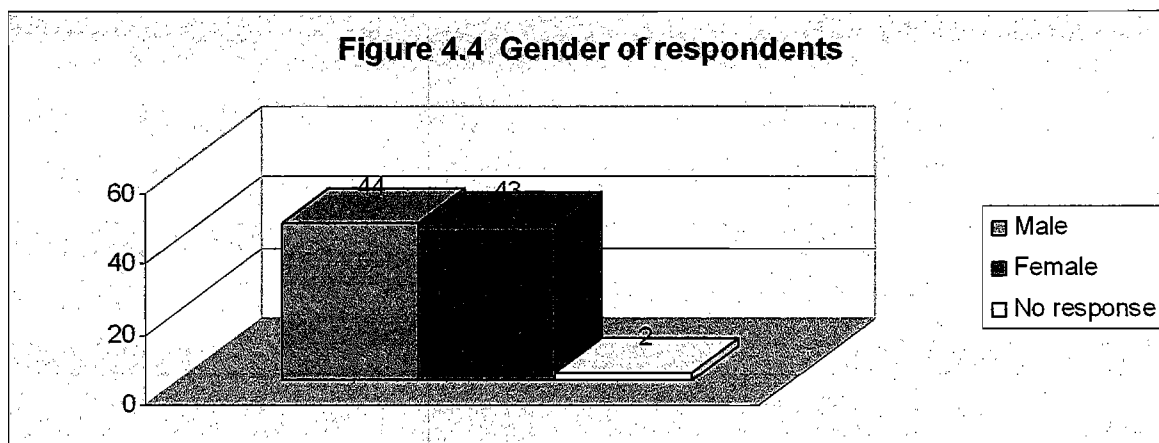


Most managers (44.71%) at the four public FET Colleges were between 50 and 59 years old, while the age interval 40 to 49 years (37.65%) made up the second largest group. It can thus be deducted that 82% of managers currently employed at the four public FET colleges falls within the age group 40 to 59 years. Four respondents did not indicate their age group.

4.4.2 Gender of respondents

In this question the split between male and female managers at the four colleges was determined as indicated in figure 4.4.

Figure 4.4 Gender of respondents



Of the total number of respondents who completed the item, 44 (50.57%) were male respondents and 43 (49.43%) were female. Two respondents did not indicate their gender.

4.4.3 Distribution per racial group

Respondents were requested to indicate their racial group. In table 4.1 the frequency distribution per race group is depicted.

Table 4.1 Frequency distribution per race group

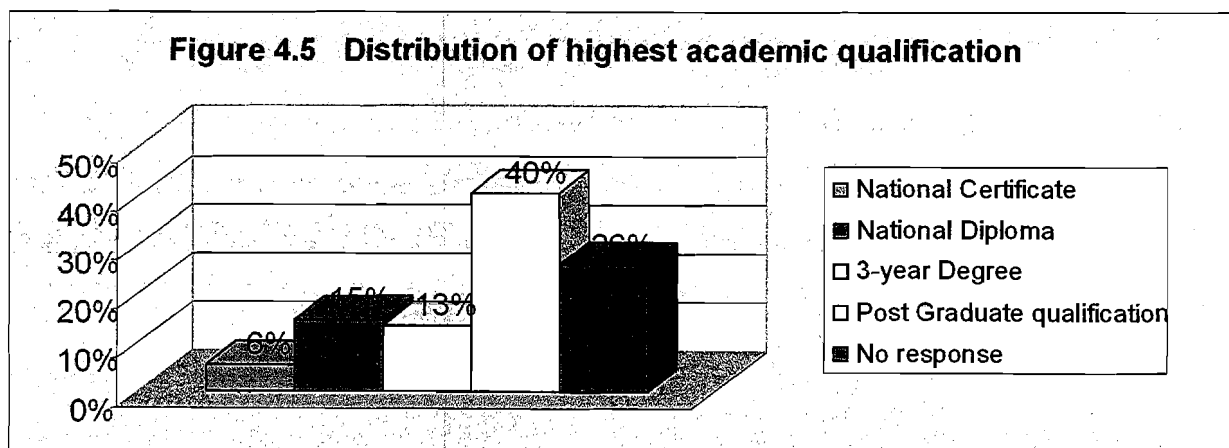
Racial group	Frequency	Percent
Black	38	42.70%
White	45	50.57%
Coloured	01	1.12%

Most managers (50.57%) that participated in the study were white, while black managers comprised 42.70%. Only one Coloured manager (1.12%) answered this question. Five respondents did not indicate their racial group.

4.4.4 Highest academic qualification of respondents

The purpose of this question was to determine the highest academic qualification of respondents in order to establish the relationship between level of qualification and intrapreneurship. Figure 4.5 indicates the highest academic qualification of managers at the four public FET Colleges.

Figure 4.5 Distribution of highest academic qualification



The largest group (53%) of respondents has a 3-year degree or higher qualification. A substantial number of respondents (26%) did not indicate their highest qualification. The large number of non-responses would impact on the interpretation of data and care should be taken when conclusions are drawn.

4.4.5 Distribution of management level

The objective of this question was to determine the distribution of management level of respondents. The information would be used to ascertain the relationship between the level of management and intrapreneurial behaviour patterns. Table 4.2 depicts responses on management level.

Table 4.2 Frequency distribution per management level

Management level	Frequency	Percent
Top	02	2.25%
Middle	22	24.72%
Lower	57	64.05%
Non-response	08	8.99%

Lower management comprised the largest category (64.05%). Eight (8.99%) of respondents did not answer this question, which would have an impact on the conclusions drawn regarding the relationship between management level and intrapreneurship.

4.4.6 Distribution of functional division

This question required of respondents to select their specific functional division from a choice of 14 given. In table 4.3 the distribution of functional division is indicated.

Table 4.3 Distribution per functional division

Division	Frequency	Percent
Education and Training	34	38.20%
Finance	01	1.12%
General Management	08	8.99%
Human Resources	02	2.25%
Health and Safety	02	2.25%
Information Technology	01	1.12%
Learnerships and Skills	05	5.62%
Marketing	06	6.74%
Quality Management	01	1.12%
Student Administration	04	4.49%
Supply Chain Management	01	1.12%
Student Services	02	2.25%
Non-response	22	24.72%

The education and training division (38.20%) makes up the largest category. The other categories are evenly distributed, ranging from 8.99% (general management) to 1% (finance, IT, quality management and supply chain management). Quite a large number of respondents (24.72%) did not respond to the item and care should be taken when data is interpreted.

4.5 RESULTS OF THE ASSESSMENT OF ENTREPRENEURIAL CHARACTERISTICS

In section B of the questionnaire, data relating to 30 entrepreneurial characteristics were collected in order to determine practically important relationships between self-assessment and supervisor assessment. Respondents had to indicate a degree of agreement/disagreement with statements made.

A five point Likert scale was used that include the following categories:

- 1 - Definite weakness
- 2 - Moderate weakness
- 3 - Neither strength nor weakness

- 4 - Moderate strength
- 5 - Definite strength

The questionnaire used in this study, as adapted from Oosthuizen (2006), measured perceptions of managers in terms of 30 entrepreneurial characteristics. An exposition of the survey results follows. Detailed results of self-assessment and supervisor assessment are graphically depicted in annexure B.

4.5.1 Self-assessment analysis in terms of entrepreneurial characteristics

In table 4.4 results of the self-assessment analysis in terms of entrepreneurial characteristics are put forward.

Table 4.4 Self-assessment results (ranked in order of mean size)

No	Entrepreneurial characteristic	N	Mean	Standard deviation
B1N1	High levels of commitment	82	4.59	0.628
B1N7	Ability to take responsibility	81	4.58	0.610
B1N16	Integrity and reliability	80	4.56	0.633
B1N28	Drive to achieve and grow	79	4.35	0.680
B1N17	Good people judgement	80	4.35	0.618
B1N10	Self-reliance	81	4.31	0.736
B1N6	High levels of perseverance	80	4.30	0.719
B1N21	Self-awareness of own strengths and weaknesses	80	4.30	0.719
B1N25	Internal locus of control	79	4.29	0.719
B1N19	Ability to adapt to change	80	4.26	0.823
B1N11	Courageous	80	4.26	0.707
B1N24	Willing to undertake personal sacrifices	81	4.25	0.969
B1N15	Generosity	80	4.25	0.819
B1N8	Problem solving skills	80	4.18	0.671
B1N18	Patience	80	4.15	0.929
B1N12	Self-confidence	80	4.14	0.759
B1N30	Open-minded lateral thinker	81	4.14	0.737
B1N9	Capacity to inspire others	81	4.12	0.781
B1N22	Quick learner that does not make mistakes twice	80	4.10	0.668
B1N3	High energy levels	77	4.09	0.934
B1N23	Able to conceptualise and sweat the details	80	4.06	0.718
B1N2	High levels of creativity and innovativeness	80	4.06	0.700
B1N20	High levels of emotional stability	80	4.04	0.787
B1N13	Ability to manage ambiguity and uncertainty	81	3.90	0.700
B1N26	Low need for status and power	80	3.89	0.981
B1N29	Tolerance for failure	80	3.83	0.938
B1N27	Restless with status quo	80	3.75	0.935
B1N4	Low support needs	77	3.70	0.904
B1N14	Ability to see opportunities in the market place	80	3.69	0.851
B1N5	Ability to tolerate risks	79	3.51	0.959
	Total	86	4.15	0.428

The average mean size of 4.15 indicates that managers perceived themselves on average, to possess moderate strengths regarding entrepreneurial characteristics. A total of 14 characteristics were scored higher than the average mean for the analysis. Managers rated three characteristics, i.e. *high levels of commitment*, *ability to take responsibility*, and *possessing reliability and integrity* highest. The characteristics with mean sizes ≥ 4.00 , can be regarded as moderate strengths.

The ability to tolerate risks was scored the lowest. From the analysis, it can be deducted that the following characteristics ($\bar{x} = < 4.00$) may be regarded as areas of development for managers:

- Ability to manage ambiguity and uncertainty;
- Low need for status and power;
- Tolerance for failure;
- Restless with status quo;
- Low support needs;
- Ability to see opportunities in the market place; and
- Ability to tolerate risks.

4.5.2 Analysis of supervisors in terms of entrepreneurial characteristics

Based on their perceptions regarding the level of entrepreneurial characteristics displayed by their supervisors, managers were requested to rate them accordingly. Table 4.5 depicts the results ranked in order of mean size.

Table 4.5 Rating of supervisors (in order of mean size)

No	Entrepreneurial characteristic	N	Mean	Standard deviation
B2N28	Drive to achieve and grow	79	4.22	0.956
B2N16	Integrity and reliability	80	4.16	1.073
B2N30	Open-minded lateral thinker	81	4.14	1.058
B2N12	Self-confidence	80	4.13	1.072
B2N1	High levels of commitment	82	4.13	1.063
B2N7	Ability to take responsibility	81	4.10	1.168
B2N19	Ability to adapt to change	80	4.10	1.014
B2N25	Internal locus of control	79	4.10	1.008
B2N6	High levels of perseverance	80	4.08	0.911
B2N23	Able to conceptualise and sweat the details	80	4.08	0.991
B2N11	Courageous	80	4.08	1.065
B2N22	Quick learner that does not make mistakes twice	80	4.06	0.972
B2N10	Self-reliance	81	4.00	1.000
B2N21	Self-awareness of own strengths and weaknesses	80	3.99	0.987
B2N8	Problem solving skills	80	3.96	1.130
B2N24	Willing to undertake personal sacrifices	81	3.96	1.145
B2N17	Good people judgement	80	3.95	1.124
B2N9	Capacity to inspire others	81	3.95	1.094
B2N13	Ability to manage ambiguity and uncertainty	81	3.95	1.048
B2N18	Patience	80	3.93	1.111
B2N15	Generosity	80	3.93	1.123
B2N2	High levels of creativity and innovativeness	80	3.89	0.981
B2N3	High energy levels	77	3.88	1.038
B2N14	Ability to see opportunities in the market place	80	3.86	1.122
B2N20	High levels of emotional stability	80	3.85	1.104
B2N26	Low need for status and power	80	3.85	1.045
B2N27	Restless with status quo	80	3.74	0.990
B2N29	Tolerance for failure	80	3.73	1.102
B2N5	Ability to tolerate risks	79	3.53	0.985
B2N4	Low support needs	77	3.43	1.057
Total		83	3.97	0.804

The average mean size is 3.97, which is lower than the average mean size ($\bar{x} = 4.15$) for self-assessment. This indicates that, compared to themselves, managers perceived their supervisors to possess lower levels of strengths in terms of entrepreneurial characteristics.

A total of 14 characteristics were scored higher than the average mean for the analysis. Managers were of the opinion that their supervisors possess the drive to achieve and grow. Furthermore, *integrity and reliability* as well as the *ability to think laterally* were rated high.

Apart from the characteristics mentioned above, supervisors were also perceived to possess moderate strengths ($\bar{x} \geq 4.00$) in the following entrepreneurial characteristics:

- Self-confidence;
- High levels of commitment;
- The ability to take responsibility;
- Can adapt to change;
- An internal locus of control;
- High levels of perseverance;
- Ability to conceptualise, but are also able to pay attention to detail;
- Courageous;
- Are quick learners and do not repeat mistakes; and
- Self-reliant.

It can be deducted that those characteristics with mean sizes of lower than 4.00, are areas of development for supervisors.

4.5.3 Analysis of differences between self-assessment and supervisor assessment in terms of entrepreneurial characteristics

The analysis of the difference between mean sizes of self-assessment and supervisor assessment is done by means of effect sizes of practical importance. As discussed in chapter 1, research results can be statistically significant, but have a trivial practical significance. Ellis and Steyn (2003: 2) define practical significance as being a large enough difference to have an affect in practice. The authors discussed a measure called “effect size” (Ellis & Steyn, 2003: 2) which is independent of sample size and units. According to Cohen (1988: 20 – 27), effect sizes (d) can be interpreted as follows:

- $d = 0.2$ depicts a small effect size;
- $d = 0.5$ depicts a medium effect size and indicates a medium relationship; and
- $d = 0.8$ indicates a large effect size and is regarded as practically significant.

In table 4.6 effect sizes of the difference between personal ratings and supervisor ratings are indicated.

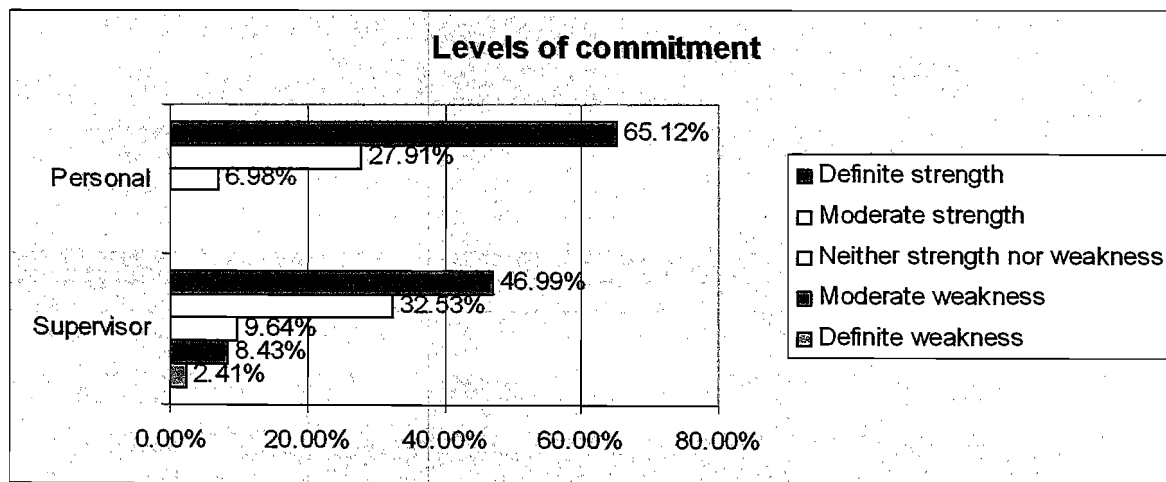
Table 4.6 Comparison between self-assessment and supervisor assessment

No	Entrepreneurial characteristic	Self-assessment			Supervisor assessment			p	d
		N ₁	$\bar{x}_1$	S ₁	N ₂	$\bar{x}_2$	S ₂	Pr>[t]	$d = \frac{\bar{x}_{diff}}{s_{diff}}$
B1	High levels of commitment	82	4.59	0.628	82	4.13	1.063	.000	0.56
B2	High levels of creativity and innovativeness	80	4.06	0.700	80	3.89	0.981	0.145	0.16
B3	High energy levels	77	4.09	0.934	77	3.88	1.038	0.091	0.19
B4	Low support needs	77	3.70	0.904	77	3.43	1.057	0.026	0.26
B5	Able to tolerate risks	79	3.51	0.959	79	3.53	0.985	0.826	0.02
B6	High levels of perseverance	80	4.30	0.719	80	4.08	0.911	0.043	0.23
B7	Ability to take responsibility	81	4.58	0.610	81	4.10	1.168	0.000	0.41
B8	Problem solving skills	80	4.18	0.671	80	3.96	1.130	0.110	0.18
B9	Capacity to inspire others	81	4.12	0.781	81	3.95	1.094	0.214	0.14
B10	Self-reliance	81	4.31	0.736	81	4.00	1.000	0.008	0.30
B11	Courageous	80	4.26	0.707	80	4.08	1.065	0.148	0.16
B12	Self-confidence	80	4.14	0.759	80	4.13	1.072	0.919	0.01
B13	Ability to manage ambiguity and uncertainty	81	3.90	0.700	81	3.95	1.048	0.679	0.05
B14	Ability to see opportunities in the market place	80	3.69	0.851	80	3.86	1.122	0.171	0.15
B15	Generosity	80	4.25	0.819	80	3.93	1.123	0.005	0.32
B16	Integrity	80	4.56	0.633	80	4.16	1.073	0.001	0.38
B17	Good people judgement	80	4.35	0.618	80	3.95	1.124	0.004	0.33
B18	Patience	80	4.15	0.929	80	3.93	1.111	0.156	0.16
B19	Able to adapt to change	80	4.26	0.823	80	4.10	1.014	0.235	0.13
B20	High levels of emotional stability	80	4.04	0.787	80	3.85	1.104	0.170	0.15
B21	Self-awareness of own strengths and weaknesses	80	4.30	0.719	80	3.99	0.987	0.006	0.31
B22	Quick learner that does not make mistakes twice	80	4.10	0.668	80	4.06	0.972	0.734	0.04
B23	Able to conceptualise and sweat the details	80	4.06	0.718	80	4.08	0.991	0.910	0.01
B24	Willing to undertake personal sacrifices	81	4.25	0.969	81	3.96	1.145	0.025	0.25
B25	Internal locus of control	79	4.29	0.719	79	4.10	1.008	0.087	0.19
B26	Low need for status and power	80	3.89	0.981	80	3.85	1.045	0.752	0.04
B27	Restless with status quo	80	3.75	0.935	80	3.74	0.990	0.916	0.01
B28	Drive to achieve and grow	79	4.35	0.680	79	4.22	0.956	0.153	0.16
B29	Tolerance for failure	80	3.83	0.938	80	3.73	1.102	0.402	0.09
B30	Open-minded lateral thinker	81	4.14	0.737	81	4.14	1.058	1.000	0.00

A comparison between self-assessment and supervisor assessment in terms of *high levels of commitment* resulted in an effect size of 0.56, which can be considered a medium relationship. A medium relationship ($d = 0.41$) between self- and supervisor assessment has also been calculated regarding the item *ability to take responsibility*. All other differences were small and not important in practice.

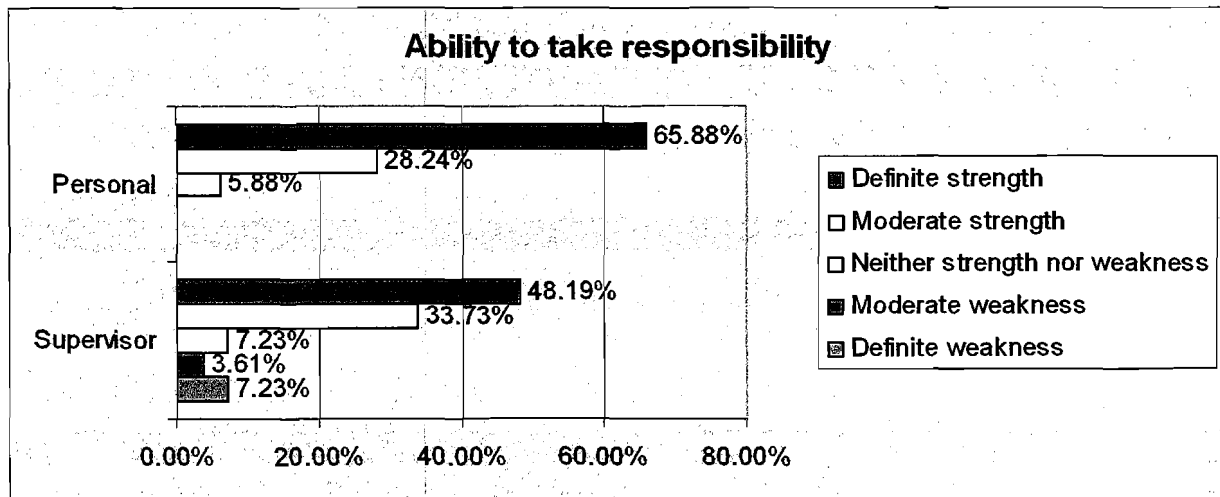
Figure 4.6 depicts the difference in self and supervisor assessment in terms of *levels of commitment*. Most managers (66.12%) indicated that they have a definite strength regarding levels of commitment, compared to a score of 46.99% for their supervisors.

Figure 4.6 Difference in ratings in terms of levels of commitment



Concerning the *ability to take responsibility*, 65.88% of managers indicated that they regard themselves to have a definite strength whereas 48.19% was of the opinion that their supervisors have a definite strength in this entrepreneurial characteristic. The results are graphically depicted in figure 4. 7.

Figure 4.7 Difference in ratings in terms of ability to take responsibility



In four items supervisors were ranked higher than managers as indicated by the mean score although the differences were not important in practice. The items are:

- Ability to see opportunities in the market place;
- Ability to manage ambiguity and uncertainty;
- Ability to tolerant risks; and
- Able to conceptualise and sweat the details.

4.6 RELIABILITY OF THE RESEARCH INSTRUMENT MEASURING THE INTRAPRENEURIAL CLIMATE WITHIN PUBLIC FET COLLEGES

According to Struwig and Stead (2004: 132), the internal consistency index indicates the average correlation among items in the research instrument. Cronbach's coefficient alpha is used in this study to calculate internal consistency. The greater the value of the Cronbach alpha coefficient, the higher the internal consistency and the more reliable the scale used in the study (Struwig & Stead, 2004: 133). Cronbach alpha coefficient values of 0.7 and higher are regarded as acceptable levels of reliability (Van der Merwe & Ellis, 2007:30).

Cronbach alpha coefficient values exceeding 0.80 and higher were recorded concerning 10 of the constructs. Table 4.7 highlights the alpha values of the constructs.

Table 4.7 Cronbach alpha coefficients of constructs (ranked in order of value size)

No	Intrapreneurial construct	Cronbach alpha coefficient
1	Inspirational leadership and a long term view	0.903
9	Teamwork	0.887
2	Encouragement of new ideas and innovativeness	0.876
12	Strong customer orientation	0.875
6	Rewarding system	0.847
11	Continuous cross-functional learning	0.847
10	Resource availability	0.845
7	Communication and strategy buy-in	0.832
4	Tolerance for risks and failure	0.818
3	Support by management and champions	0.813
5	Implementation of new processes	0.781
8	Discretionary time and volunteer programmes	0.713
13	Autonomy	0.693

The results as indicated in table 4.6 suggest that the research instrument used in this study to assess the intrapreneurial climate within public FET Colleges, has acceptable reliability, since only one construct, i.e. *autonomy*, had a lower alpha coefficient than 0.7.

For a detailed analysis of the intrapreneurship constructs and their Cronbach coefficient alpha values, refer to annexure D.

4.7 AN ASSESSMENT OF THE INTRAPRENEURIAL CLIMATE WITHIN FET COLLEGES

The objective of this assessment was to determine the extent to which intrapreneurship constructs are prevalent at the four public FET colleges as perceived by managers. A Likert scale was used that included the following categories:

- 1 - strongly disagree
- 2 – slightly disagree

- 3 - neither agree nor disagree
- 4 – slightly agree
- 5 - strongly agree

In a normal distribution, the majority of values lie within an interval of plus and minus one standard deviation above and below the mean. The more dispersed the data, the larger the standard deviation and the more concentrated the data, the smaller the standard deviation (Levine *et al.*, 2006: 118). The results of the means analysis for the 13 main constructs are presented in table 4.8. In annexures C and E all the constructs and their items are depicted.

Table 4.8 Intrapreneurial climate constructs ranked in terms of mean size

Entrepreneurial climate construct	N	Mean	Standard deviation
Communication and strategy buy-in	84	3.328	1.357
Inspirational leadership and a long term view	86	3.255	1.416
Continuous cross-functional learning	84	3.230	1.392
Discretionary time and volunteer programmes	85	3.213	1.328
Teamwork	86	3.199	1.297
Implementation of new processes	84	3.060	1.315
Encouragement of new ideas and innovativeness	84	3.035	1.353
Average mean		3.009	
Autonomy	87	3.001	1.288
Support by management and champions	87	2.969	1.339
Tolerance for risks and failure	89	2.959	1.257
Strong customer orientation	85	2.880	1.119
Rewarding system	79	2.552	1.324
Resource availability	84	2.432	1.277

The average mean of all constructs as evaluated by managers was 3.009, indicating that the prevalence of intrapreneurship constructs within colleges is regarded by managers as being three out of five on the Likert scale. The means of six constructs were lower than the average mean ($\bar{x} = 3.009$) while seven constructs were ranked higher. To present the comprehensive set of data, the average mean obtained in this analysis, would be used as a benchmark.

4.7.1 Constructs that were evaluated lower than the average mean ($\bar{x} = 3.009$)

The following is an exposition of constructs that were evaluated lower than the average mean for this study.

- **Autonomy** ($\bar{x} = 3.001$; $s = 1.288$). Managers were of the opinion that they have to go through elaborate justification procedures to get approval for decisions regarding their work. However, it was also indicated that they are allowed freedom and independence in the actual execution of their duties. The determination of key performance areas is done in co-operation with their supervisors.
- **Support by management and champions** ($\bar{x} = 2.969$; $s = 1.339$). Managers indicated that their supervisors provide the necessary assistance in the workplace by removing obstacles in their way. According to the respondents, supervisors at colleges have the necessary skills and commitment to be effective champions of intrapreneurial initiatives. On the other hand, managers were of the opinion that a shortage of sponsors/champions exists with which to protect and support new projects.
- **Tolerance for risks and failure** ($\bar{x} = 2.959$; $s = 1.257$). Managers indicated that calculated risks taken at the right time do result in development at Colleges. It was also specified that although a tolerance for failure exists at colleges, projects involving risks are not valued sufficiently.
- **Strong customer orientation** ($\bar{x} = 2.880$; $s = 1.119$). Although most managers were of the opinion that customers are treated as very important stakeholders at colleges, they indicated that resources are not spent sufficiently on determining customer needs. The analysis furthermore pointed out that customers should be involved more in product and service development.

- **Rewarding system** ($\bar{x} = 2.552$; $s = 1.324$). Managers pointed out that the rewarding system at colleges does not sufficiently make provision for intrapreneurial activities, nor does it provide incentives for the implementation of innovative projects. On the other hand, managers were of the opinion that supervisors do give recognition for good performance.
- **Resource availability** ($\bar{x} = 2.432$; $s = 1.227$). The means of all five items were evaluated as lower than the average mean for all constructs ($\bar{x} = 3.009$) implying that managers were of the opinion that resources are not readily available at colleges.

4.7.2 Constructs that were evaluated higher than the average mean ($\bar{x} = 3.009$)

The seven intrapreneurial constructs that were evaluated to have means higher than the average, are discussed below.

- **Encouragement of new ideas and innovativeness** ($\bar{x} = 3.035$; $s = 1.353$). It was indicated that management at colleges encourages the development of innovative ideas and is receptive to them. However, the creation of innovative ideas was regarded as being insufficient, while restrictive rules and procedures were pointed out to be a constraining factor to innovation.
- **Implementation of new processes** ($\bar{x} = 3.060$; $s = 1.315$). The analysis revealed that employees at colleges are encouraged to be innovative and push their boundaries, while trying out new methods of doing their work. According to the managers, they are provided with training opportunities aimed at the effective implementation of new processes. Conversely, it was pointed out that the number of employees involved in generating and implementing innovative ideas is an area of development as is the time it takes for actual implementation of new processes.

- **Teamwork** ($\bar{x} = 3.199$; $s = 1.392$). The use of cross-functional teams at Colleges to develop and implement new ideas was scored below the average mean size. Furthermore, most managers slightly disagreed with the statement that project teams have autonomy to recruit and select new team members. On the other hand, it was indicated that the establishment of diverse, cross-functional teams are encouraged at colleges.
- **Discretionary time and volunteer programmes** ($\bar{x} = 3.213$; $s = 1.328$). According to managers, the development of new ideas is done on a voluntary basis, while ample opportunities for learning and growth are provided. Most managers slightly disagreed with the statement that discretionary time for the development of new ideas is allowed. They were also of the opinion that initiators of projects are not sufficiently allowed time to carry them through to completion.
- **Continuous cross-functional learning** ($\bar{x} = 3.230$; $s = 1.392$). Managers slightly agreed that employees are encouraged and willing to stay abreast of developments in their functional fields and to share their knowledge with others. The openness of communication channels that allow for participation from all employees was scored lower than the mean for this construct.
- **Inspirational leadership and a long term view** ($\bar{x} = 3.255$; $s = 1.416$). The item *"Our leaders take a long term view of the college"* scored a higher mean than the average for the construct. It can thus be concluded that according to the respondents, their leaders have the ability to manage strategically. On the other hand, managers took a neutral stance on whether their leaders challenge the status quo and are inspirational. The same applied to the importance attached to the value system at Colleges.
- **Communication and strategy buy-in** ($\bar{x} = 3.328$; $s = 1.357$). From the analysis it became clear that employees at colleges are relatively well informed about the vision

and strategies of the organisations and the relevance to their divisions. It was also indicated that information is disseminated in meetings with supervisors. On the other hand, the role of organisational vision and strategies in setting priorities was indicated to be an area of development. Managers furthermore gave neutral responses on the extent of buy-in by employees into value systems of colleges.

4.8 ANALYSIS OF THE SIGNIFICANCE OF RELATIONSHIPS BETWEEN DEMOGRAPHIC VARIABLES AND INTRAPRENEURIAL CLIMATE CONSTRUCTS

An analysis was done to determine the relationship between the demographic variables and responses concerning 13 intrapreneurial climate constructs. Respondents were categorised in terms of age, gender, race, qualifications and management level. Effect sizes were calculated to determine whether the relationship between two variables is practically significant, i.e. whether the relationship is large enough to be important (Ellis & Steyn, 2003: 4).

4.8.1 Effect of age on responses concerning intrapreneurial climate constructs

Table 4.9 depicts the effect of age on responses regarding intrapreneurship constructs in terms of mean and standard deviation. Three categories were distinguished, i.e. 30 to 39 years (n = 10); 40 to 49 years (n = 32) and 50+ years (n = 43).

Table 4.9 Effect of age on responses

Construct	30 – 39 years of age N = 10		40 – 49 years of age N = 32		50 + years of age N = 43	
	Mean	Std dev	Mean	Std dev	Mean	Std dev
Inspirational leadership and a long term view	3.62	1.14	3.14	1.25	3.16	1.12
Encouragement of new ideas and innovativeness	3.20	1.03	3.10	1.18	2.96	1.05
Support by management and champions	3.30	1.06	2.95	0.99	2.87	0.96
Tolerance for risks and failure	3.18	1.10	2.96	1.03	2.84	0.85
Implementation of new processes	3.50	1.05	2.98	0.97	2.98	0.90
Rewarding system	2.66	1.05	2.48	0.93	2.57	1.10
Communication and strategy buy-in	3.70	0.92	3.34	1.08	3.20	1.02
Discretionary time and volunteer programmes	3.66	0.71	3.15	0.97	3.16	0.85
Teamwork	3.48	0.96	3.18	1.09	3.14	1.11
Resource availability	2.42	0.90	2.31	0.80	2.47	1.04
Continuous cross-functional learning	3.56	0.91	3.21	1.04	3.10	1.15
Strong customer orientation	3.15	1.17	2.73	1.10	2.84	1.11
Autonomy	3.28	0.89	3.02	0.89	2.89	0.78

Respondents in the age group 30 to 39 years of age scored higher means than the other two groups in all intrapreneurial climate constructs, except for *resource availability*, that was scored higher by respondents in the age group 50+ years.

Effect sizes were calculated to ascertain the existence of practical significant relationships between age and intrapreneurial climate constructs. Medium relationships were determined between age and seven of the constructs. In table 4.10 the relationships in terms of effect sizes are indicated.

Table 4.10 Relationships between age and intrapreneurial climate constructs

Construct	30 – 39 years of age	40 to 49 years of age	50 + years of age	Effect size
Inspirational leadership and a long term view	√		√	0.40
Encouragement of new ideas and innovativeness	Effect sizes too small to be of practical significance			
Support by management and champions	√		√	0.41
Tolerance for risks and failure	Effect sizes too small to be of practical significance			
Implementation of new processes	√		√	0.49
Rewarding system	Effect sizes too small to be of practical significance			
Communication and strategy buy-in	√		√	0.49
Discretionary time and volunteer programmes	√	√		0.53
	√		√	0.59
Teamwork	Effect sizes too small to be of practical significance			
Resource availability	Effect sizes too small to be of practical significance			
Continuous cross-functional learning	√		√	0.40
Strong customer orientation	Effect sizes too small to be of practical significance			
Autonomy	√		√	0.44

Legend: √ indicates applicable groups in terms of the effect size indicated

4.8.2 Effect of gender on responses concerning intrapreneurial climate constructs

In table 4.11 the effect of gender on responses regarding intrapreneurship constructs is depicted. In all instances the effect sizes are too small to be of any practical significance.

Table 4.11 Effect of gender on responses concerning intrapreneurial climate constructs

Construct	Male n = 44		Female n = 43		Effect size
	Mean	Std dev	Mean	Std dev	
Inspirational leadership and a long term view	3.08	1.20	3.36	1.10	0.23
Encouragement of new ideas and innovativeness	2.95	1.07	3.15	1.09	0.18
Support by management and champions	2.98	1.01	2.96	0.98	0.02
Tolerance for risks and failure	2.91	0.94	2.98	0.98	0.08
Implementation of new processes	3.04	0.93	3.08	0.96	0.05
Rewarding system	2.58	1.07	2.58	1.01	0.00
Communication and strategy buy-in	3.17	1.03	3.50	1.02	0.32
Discretionary time and volunteer programmes	3.29	0.89	3.17	0.88	0.13
Teamwork	3.14	1.04	3.29	1.12	0.13
Resource availability	2.56	0.97	2.30	0.92	0.27
Continuous cross-functional learning	3.06	1.06	3.38	1.08	0.30
Strong customer orientation	2.79	1.07	2.94	1.16	0.13
Autonomy	2.86	0.81	3.12	0.87	0.30

4.8.3 Effect of race on responses concerning intrapreneurship constructs

Respondents were categorised in two racial groups, i.e. blacks (n = 39) and whites (n = 45). In table 4.12 the results are indicated regarding the effect of race on responses.

Table 4.12 Effect of race on responses

Construct	Black n = 39		White n = 45		Effect size
	Mean	Std Dev	Mean	Std Dev	
Inspirational leadership and a long term view	3.34	1.14	3.13	1.21	0.17
Encouragement of new ideas and innovativeness	3.22	1.13	2.92	1.06	0.27
Support by management and champions	3.24	0.96	2.75	0.98	0.50
Tolerance for risks and failure	3.21	1.02	2.72	0.83	0.47
Implementation of new processes	3.26	1.02	2.88	0.88	0.37
Rewarding system	2.74	1.09	2.41	0.97	0.30
Communication and strategy buy-in	3.49	1.09	3.20	1.01	0.26
Discretionary time and volunteer programmes	3.36	0.98	3.16	0.81	0.20
Teamwork	3.48	1.11	3.01	1.05	0.42
Resource availability	2.64	0.90	2.23	0.95	0.43
Continuous cross-functional learning	3.46	1.11	3.00	1.05	0.41
Strong customer orientation	3.19	1.13	2.57	1.05	0.54
Autonomy	3.03	0.94	3.01	0.74	0.02

Medium effect sizes were calculated regarding three constructs, i.e.:

- Support by management and champions ($d = 0.50$);
- Tolerance for risks and failure ($d = 0.47$; and
- Strong customer orientation ($d = 0.54$).

4.8.4 Effect of qualifications on responses concerning intrapreneurial climate constructs

Section C of the questionnaire required of respondents to select their highest qualification from among four categories, i.e. National Certificate, National Diploma, 3-year degree and post-graduate qualification. A total number of 66 respondents completed this question. Five respondents indicated that they had National Certificates, 13 had National Diplomas, 12 had a 3-year degree and 36 had post-graduate qualifications.

In order to compare the effect of qualification on responses regarding the constructs, respondents were grouped into three categories, i.e.:

- National Certificates and National Diplomas: group 1 ($n = 18$);
- 3 –year degree: group 2 ($n = 12$); and
- Post-graduate qualification: group 3 ($n = 36$).

Table 4.13 presents the results of the effect of qualifications on responses.

Table 4.13 Effect of qualifications on responses

Construct	National Certificates and Diplomas N = 18		3-year Degree N = 12		Post-graduate N = 36	
	Mean	Std dev	Mean	Std dev	Mean	Std dev
Inspirational leadership and a long term view	3.62	0.97	2.98	1.45	3.21	1.19
Encouragement of new ideas and innovativeness	3.48	0.75	2.70	1.34	3.06	1.13
Support by management and champions	3.29	0.71	2.74	1.09	2.96	1.01
Tolerance for risks and failure	3.21	0.87	2.78	1.14	2.97	0.91
Implementation of new processes	3.36	0.76	2.92	1.03	3.03	0.99
Rewarding system	2.73	1.10	2.59	1.13	2.41	0.98
Communication and strategy buy-in	3.38	0.98	3.28	1.06	3.37	1.06
Discretionary time and volunteer programmes	3.38	0.68	3.08	0.95	3.27	0.91
Teamwork	3.60	0.89	3.06	1.18	3.16	1.11
Resource availability	2.82	0.65	2.09	0.78	2.39	0.98
Continuous cross-functional learning	3.44	0.88	3.22	1.02	3.22	1.21
Strong customer orientation	2.97	1.18	2.57	1.01	2.88	1.18
Autonomy	3.30	0.55	2.72	1.10	2.93	0.83

Effect sizes were calculated to ascertain the existence of practical significant relationships between qualifications and intrapreneurial climate constructs. Medium relationships were determined between qualification and seven of the constructs. In table 4.14 the relationships in terms of effect sizes are indicated.

Table 4.14 Relationships between qualifications and intrapreneurial climate constructs

Intrapreneurial Climate Construct	National Certificates and Diplomas N = 18	3-year Degree N = 12	Post- graduate N = 36	Effect size
Inspirational leadership and a long term view	√	√		0.44
Encouragement of new ideas and innovativeness	√	√		0.58
Support by management and champions	√	√		0.51
Tolerance for risks and failure	Effect sizes too small to be of practical significance			
Implementation of new processes	√	√		0.43
Rewarding system	Effect sizes too small to be of practical significance			
Communication and strategy buy-in	Effect sizes too small to be of practical significance			
Discretionary time and volunteer programmes	Effect sizes too small to be of practical significance			
Teamwork	√	√		0.46
Resource availability	√	√		0.99
	√		√	0.44
Continuous cross-functional learning	Effect sizes too small to be of practical significance			
Strong customer orientation	Effect sizes too small to be of practical significance			
Autonomy	√	√		0.53
	√		√	0.44

Legend: √ indicates applicable groups in terms of the effect size indicated

4.8.5 Effect of management level on responses concerning intrapreneurship constructs

Respondents had to indicate their managerial level in terms of top, middle and lower level. A total of 81 respondents specified their management level. Two respondents indicated they are top managers, 22 were middle management and 57 revealed that they are lower management. For the sake of the analysis the two top managers were combined with the middle management as group 1.

Medium effect sizes ($d = 0.5$) indicating medium relationships, were calculated in terms of ten of the constructs, whereas large effect sizes ($d = 0.8$) were calculated regarding two of the constructs. In table 4.15 the results of the analysis are presented.

Table 4.15 Effect of management level on responses concerning constructs

Construct	Top and Middle Management N = 24		Lower Management N = 57		Effect size
	Mean	Std Dev	Mean	Std Dev	
Inspirational leadership and a long term view	3.74	0.78	3.02	1.24	0.58
Encouragement of new ideas and innovativeness	3.68	0.72	2.80	1.11	0.79
Support by management and champions	3.53	0.72	2.75	1.01	0.77
Tolerance for risks and failure	3.36	0.66	2.76	0.98	0.61
Implementation of new processes	3.56	0.73	2.85	0.97	0.73
Rewarding system	2.93	0.82	2.44	1.09	0.45
Communication and strategy buy-in	3.88	0.70	3.13	1.09	0.69
Discretionary time and volunteer programmes	3.62	0.76	3.08	0.90	0.59
Teamwork	3.70	0.67	3.05	1.17	0.56
Resource availability	2.98	0.72	2.20	0.94	0.82
Continuous cross-functional learning	3.81	0.82	2.98	1.11	0.75
Strong customer orientation	3.48	0.74	2.59	1.17	0.76
Autonomy	3.30	0.68	2.83	0.91	0.51

4.9 CHAPTER SUMMARY

In this chapter the results of the empirical study were presented. The sampling frame, responses to the survey, demographic information of respondents in terms of age, gender, race, qualifications, management level and functional division, were discussed.

Results of differences in responses in terms of self-assessment and supervisor assessment concerning entrepreneurial characteristics were put forward. In only two instances, i.e. *high levels of commitment and ability to take responsibility* were the effect sizes large enough to indicate medium practical significance.

Cronbach's alpha coefficient values were used to determine the internal consistency among items in the research instrument. In only three of the constructs alpha values of less than .80 were calculated, indicating a relatively high level of internal reliability of the research instrument.

An assessment of the intrapreneurial climate within colleges was conducted and the average mean for the study calculated. The means of seven constructs were lower than the average mean ($\bar{x} = 3.009$) while six constructs were ranked higher.

Standard deviations were calculated and a relatively low level of variability was determined between responses in six of the constructs since their standard deviations were relatively small. Data on five of the constructs was more spread out, as indicated by larger standard deviations.

An analysis was done to determine the relationship between demographic variables and responses concerning 13 intrapreneurial climate constructs. The effect of age, gender, race, management level and qualification on responses regarding 13 intrapreneurial climate constructs was analysed and effect sizes of practical significance were determined.

In the following chapter conclusions will be drawn from the findings discussed in this chapter and recommendations will be made on how to foster an entrepreneurial climate within the four public FET colleges.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

This final chapter on the assessment of the intrapreneurial climate within four public FET Colleges in the Free State Province comprises two sections. In the first section of the chapter, conclusions will be drawn based on results of the literature study and findings of the empirical study. Having kept in mind the primary and secondary objectives of the study as formulated in chapter 1, the discussion focuses on findings of the assessment of the current intrapreneurial climate within colleges. Furthermore, conclusions will be drawn pertaining practically important relationships which have been identified between self and supervisor assessment in terms of entrepreneurial characteristics. The relevance of relationships between demographic variables, i.e. age, gender, race, highest academic qualification, management level and constructs of the intrapreneurial climate will be illustrated.

In the second section of the chapter, a framework of guidelines containing recommendations will be put forward on the fostering of an intrapreneurial climate within public FET colleges in the Free State. To facilitate this process, an action plan which is aligned to the recommendations, is presented.

5.2 CONCLUSIONS

5.2.1 General demographic information

Demographic information of respondents was obtained regarding age, gender, racial group, qualification, management level and functional division. Relationships between

the first five demographic variables and intrapreneurial climate constructs are discussed in section 5.2.5. Due to a number of non-responses regarding highest qualification, management level and functional division, care should be exercised when interpreting findings concerning these variables.

The following general conclusions are drawn regarding demographic variables:

- A large number of managers at public FET Colleges are between 40 and 59 years of age. This can be seen as a threat to public FET Colleges since it suggests that young people are not lured to a career in FET education, which could impact negatively on innovativeness in general terms in the sector.
- There is an almost equal split regarding gender among managers at public FET colleges.
- Most managers, who responded to the item on race, are white.
- The largest group (40%) of respondents has a post-graduate qualification. A substantial number of respondents (26%) did not indicate their qualifications. The reason for the large number of non-responses is not clear, but it may be ascribed to respondents not being willing to indicate their qualifications.
- Most respondents were from the education and training division.

Detailed conclusions on the relationships between demographic variables and intrapreneurial climate constructs are presented in section 5.2.5.

5.2.2 Entrepreneurial characteristics

Managers perceived themselves to possess moderate strengths regarding 23 entrepreneurial characteristics. On the other hand, they took a neutral stance regarding the assessment of their supervisors. It can thus be concluded that, compared to themselves, managers perceived their supervisors to possess lower levels of strengths in terms of entrepreneurial characteristics.

A comparison between the results of the self-assessment and supervisor assessment in terms of the five highest rated entrepreneurial characteristics is presented in table 5.1.

Table 5.1 Five highest rated entrepreneurial characteristics

Ranking	Self-assessment Entrepreneurial characteristic	Ranking	Supervisor-assessment Entrepreneurial characteristic
1	High levels of commitment	1	1. Drive to achieve and grow
2	Ability to take responsibility	2	2. Integrity and reliability
3	Integrity and reliability	3	3. Open-minded lateral thinker
4	Drive to achieve and grow	4	4. Self-confidence
5	Good people judgement	5	5. High levels of commitment

When comparing self-assessment and supervisor assessment, visible medium relationships have been calculated in terms of *high levels of commitment* ($d = 0.56$) and *ability to take responsibility* ($d = 0.41$). Based on the analysis, it can be concluded that managers and supervisors in FET colleges already possess moderate strengths regarding some entrepreneurial characteristics, which should be emphasised and developed.

Entrepreneurial characteristics which can be regarded as areas of development are highlighted in table 5.2. The characteristics identified as areas of development should be the focus of training interventions. Recommendations in this regard would be discussed in more detail in section 5.3.

Table 5.2 Five lowest rated entrepreneurial characteristics

No	Self-assessment Entrepreneurial characteristic	No	Supervisor-assessment Entrepreneurial characteristic
30	Ability to tolerate risks	30	Low support needs
29	Ability to see opportunities in the market place	29	Ability to tolerate risks
28	Low support needs	28	Restless with status quo
27	Restless with status quo	27	Tolerance for failure
26	Tolerance for failure	26	Low need for status and power

5.2.3 Reliability of the research instrument measuring the intrapreneurial climate within public FET Colleges

Due to the fact that Cronbach alpha coefficient values exceeding 0.80 and higher were recorded concerning 10 of the constructs it has been concluded that the research instrument used in this study to assess the intrapreneurial climate within public FET colleges, has acceptable reliability.

5.2.4 Assessment of the intrapreneurial climate within Colleges

The average mean of all constructs as evaluated by managers was 3.009 which can be regarded as an average score in terms of the five point Likert scale which has been employed in the study. This average mean is used as a benchmark for the purpose of making recommendations. Mean scores of $\bar{x} < 3.009$ are interpreted as being indicative of perceptions by managers that those constructs have lower than average prevalence at colleges and therefore reveal areas that call for development. Conversely, mean scores of $\bar{x} > 3.009$ are interpreted as being indicative of a higher than average prevalence, pinpointing areas that could be built on to enhance the intrapreneurial climate within colleges.

From the analysis, the following conclusions can be drawn:

- All intrapreneurial climate constructs that have been measured are present at colleges, although the level of intrapreneurship within colleges is regarded as average by respondents.
- Lack of resources, especially financial resources, is a major barrier to fostering intrapreneurial behaviour within colleges.
- The rewarding system is not conducive to intrapreneurial behaviour. Incentive schemes do not exist and there is no relation between reward and performance. However, supervisors have been known to give recognition for good performance.

- Customers are not sufficiently involved in new product development and colleges do not have a strong customer orientation.
- Tolerance for risk and failure is relatively low at the four public FET colleges.
- Sufficient support for small, experimental projects is not provided and the inclination to take risks in order to stay abreast of competition is lacking.
- There is a lack of support for innovative ideas by influential people and it is difficult to build coalitions of sponsors for new ideas and projects.
- Managers at public FET colleges have to go through elaborate justification and approval procedures prior to implementation of work processes. However, these managers are allowed the necessary freedom to decide how to do their work. Objectives are determined by means of a consultation process between managers and supervisors.
- Opportunities at colleges are not sufficiently exploited.
- Although senior management encourages new ideas and innovativeness, actual idea generation is in short supply. Inflexible rules and procedures hamper innovation.
- Creativity is encouraged and training is provided to ensure that innovative processes are effectively implemented. It does however take relatively long to implement new processes.
- Although diverse cross-functional teams are encouraged by senior management, the teams perform below average regarding new idea development and innovation. A fair measure of inflexibility exist pertaining selection of team members.
- Colleges provide ample opportunities for learning and growth.
- Idea generation at colleges is on a voluntary basis and employees are allowed some extent of freedom to carry ideas to fruition. However, insufficient discretionary time is allowed to develop these during working hours.
- Employees assist one another and voluntarily share knowledge and skills. Furthermore, employees stay abreast of new developments in their functional fields.
- Open communication channels do exist at colleges, although variability in responses indicated disagreement among respondents in terms of openness.
- College leaders plan strategically, taking a long term view. However, inspirational leadership is regarded as below average.

- Managers are well-informed regarding visions and strategies which are used to set work-related priorities.
- Corporate values are known to managers; however employee buy-in into value systems is below average.

5.2.5 Significance of the relationships between demographic variables and intrapreneurial climate constructs

Conclusions on the analysis of the significance of relationships between demographic variables and intrapreneurial climate constructs are indicated below.

- **Relationship between age and intrapreneurial climate constructs**

The study indicates that respondents in the age group 30 to 39 years of age have a more positive disposition than other age groups regarding the level of intrapreneurship at public FET colleges. If it may be assumed that younger managers have been employed more recently than managers in the age group 40+, it can be concluded that younger, more recently appointed managers are more inclined towards intrapreneurship than their older, longer serving counterparts. This finding is confirmed by Zampetakis and Moustakis (2007: 24) who put forward that that newly appointed employees tolerate change better than those with many years of service in the public sector.

- **Relationship between gender and intrapreneurial climate constructs**

Based on the results of the analysis regarding the relationship between gender and intrapreneurial climate constructs, it has been concluded that gender does not visibly influence respondents' perceptions of intrapreneurship at public FET colleges in the Free State. The conclusion is in agreement with findings by Zampetakis and Moustakis (2007: 24) who argued that they could find no conclusive evidence of the existence of a positive correlation between gender and the display of public entrepreneurial behaviour.

- **Relationship between race and intrapreneurial climate constructs**

From the analysis it has become evident that a medium relationship exists between race and three constructs, i.e. *Support by management and champions*, *Tolerance for risks and failure* and *Strong customer orientation*. Black managers were more in agreement than their white counterparts regarding the presence of above-mentioned intrapreneurial climate constructs at colleges. No relationship of practical significance could be determined between race and the remainder of the constructs.

- **Relationship between qualification and intrapreneurial climate constructs**

Based on data analysis, it can be concluded that respondents possessing National Certificates and Diplomas generally agree more than those with higher qualifications that intrapreneurial climates exist at colleges. The conclusion confirms a finding by Zampetakis and Moustakis (2007:24) that employees with tertiary education were not more entrepreneurial than those without.

- **Relationship between management level and intrapreneurial climate constructs**

Top and middle management are more in agreement than lower management regarding the existence of intrapreneurial climates at colleges. Eight respondents did not indicate their management levels. It is not clear why respondents omitted to respond to the item but it may be attributed to the fact that these respondents wanted to protect their anonymity.

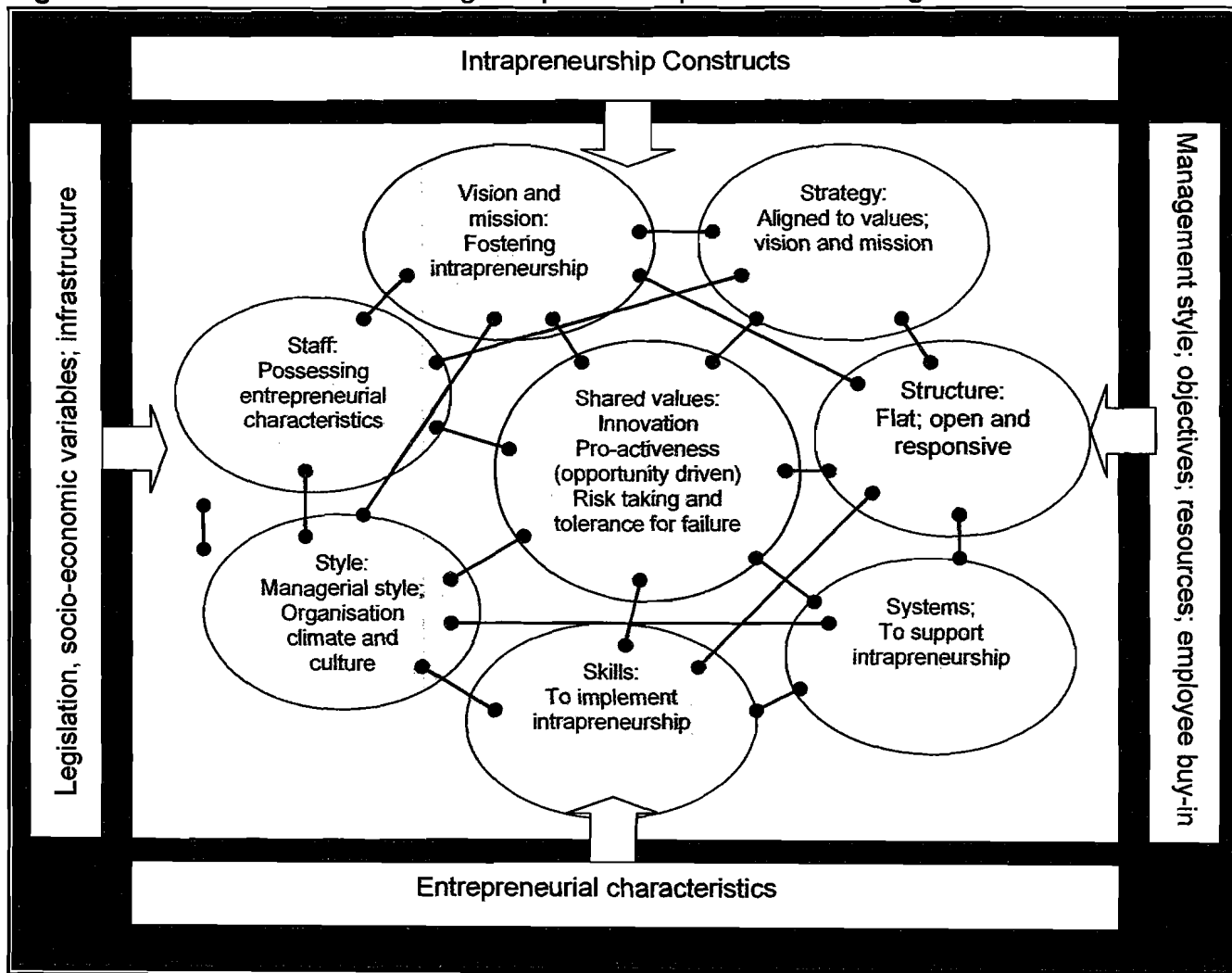
In section 5.3 of this chapter, a framework with guidelines will be presented that could facilitate the fostering of an intrapreneurial climate within public FET colleges. The framework would be based on the McKinsey Seven-S model as adapted from Jacobs and Kruger (2001: 3) and the integrated framework for intrapreneurship as put forward by Oosthuizen (2006: 269). The framework is depicted in figure 5.1. Finally, an action

plan for the practical implementation of intrapreneurship within public FET Colleges will be presented in section 5.4.

5.3 RECOMMENDATIONS

The decision to adopt intrapreneurship in the organisation is a strategic choice (Jacobs & Kruger, 2001:1). A new strategic approach should be embraced in the organisation to facilitate this process. For high levels of intrapreneurship to be established and maintained within an organisation, congruency must exist amongst its culture, the principles underlying intrapreneurship, as well as sector-specific demands and expectations. There must be a balanced perspective and holistic approach that encompass a shift in focus from the hard, more tangible elements of work organizations (strategy, structure, systems and transactions) to the softer, more intangible elements (skills, staff, leadership style, relationships and shared values).

Figure 5.1 Framework for fostering intrapreneurship within FET colleges



Adapted from Oosthuizen (2006: 269); Jacobs and Kruger (2001: 10)

5.3.1 Vision and mission

According to Gupta *et al.* (2004: 244), the presence of an entrepreneurial vision is imperative for encouraging intrapreneurial action in an institution, since it provides direction and purpose to the organisation. Intrapreneurial climate constructs should inform top management when formulating the vision and mission statement of the college.

In order to formulate the mission statement, Covey (1989: 106) recommends to “Begin with the end in mind”. The end-results of what the college wants to achieve by adopting intrapreneurship, should be determined and articulated at the onset to all employees. In this way the mission statement would become the anchor within the organisation that keeps it intact.

5.3.2 Shared values

Shared values (also called superordinate goals) indicate what the organisation stands for and what it believes in. The existence of congruency between personal and organisational values ensures that the hearts and souls of employees are engaged and a sense of belonging is created.

Corporate values at public FET colleges should strengthen intrapreneurship behaviour patterns within these institutions. Aligned-commitment from all employees into the value system is imperative for creating synergy within the college. It is therefore imperative that prevalent values are aligned to those that appear on the notice boards.

To bring about the buy-in from employees into the value system a bottom-up approach is recommended in which all are to be involved:

- Identify values prevalent in the college by conducting a survey in which all employees indicate their individual values.
- Identify areas of conflict between individual and corporate values; as well as between value systems of groups of employees.
- Top management states what the organisation stands for.
- Alignment of different value systems and identification of three to five dominant values, which can include *innovation, risk taking and tolerance for failure* as well as *pro-activeness* should be brought about. Top management should stress the fact that mistakes would be tolerated within the organisation in the quest for creativity and

improved service delivery (Van der Merwe & Oosthuizen, 2008: 16; Hisrich *et al.*, 2007: 48; Morris & Jones, 1999: 76).

- There needs to be communication of aligned corporate values to all stakeholders on a continuous basis to ensure re-inforcement (Hitt *et al.*, 1999: 148).

5.3.3 Strategy

Strategy refers to the blueprint of an organisation that indicates the course of action that would be taken and the manner in which resources would be allocated. Strategic entrepreneurship is the integration of opportunity seeking actions and advancement seeking actions into wealth creating strategies (Sathe, 2003: 2). The following guidelines are put forward:

- A strategic choice should be made regarding intrapreneurship within the college.
- Intrapreneurial practices should be included when setting strategic objectives.
- Leaders must have a dual focus on the present and the future. They must understand the importance of maintaining best practices of the past, but must also be willing to sponsor necessary renewals.
- Inputs into the strategic process should be obtained from employees at all levels within the organisation (Anon., 2008b: 1). This would lead to aligned-commitment from all employees to intrapreneurship.
- Top management should provide support for small, experimental projects.
- College leaders should continue to plan strategically, taking a long term view.

5.3.4 Structure

Structure refers to the prominent features of the organisational chart and the way in which the units of the organisation relate to one another. Van der Merwe and Oosthuizen (2008: 18) assert that an entrepreneurial organisational structure should be flat with open communication channels. Additional guidelines include:

- The organisational structure should allow for a free-flow of ideas and participation from employees.
- The structure should facilitate the process of employee empowerment (Oosthuizen, 2006: 254).
- The organisational structure should allow for decentralisation of decision-making authority; it should be flexible and inhibiting rules and regulations should be removed (Hisrich & Peters, 2002: 330; Covin & Slevin, 1991: 18).
- The organisational structure should be network-oriented, rather than hierarchical (Dhliwayo, 2007: 112).
- The organisational structure should foster responsiveness and allow for rapid changing conditions and innovation (Osborne & Gaebler, 1993).

In conclusion, an organic organisational structure which is adaptable; has open communication channels and more dispersed power bases is proposed. Little or no political intrusion should be allowed (Sadler, 2000: 30). This can be achieved by the formation of business units within the college once the right strategic decisions have been made.

5.3.5 Systems

Systems refer to procedures, processes and routines that characterise how the work should be done. Processes and procedures should be aligned to the vision and entrepreneurial strategy of the organisation. The following practical guidelines are put forward:

Systems should support strong customer orientations

- Market exposure of managers at public FET College should be increased in order for them to get close to customers. Close liaison with business and industry and representation in community organisations are to be recommended.

- Emphasis should be placed on the involvement of customers in new programme development. This can be done by means of bi-lateral forums.
- Resources should be made available to keep track of customers' needs, preferences and changes in buying behaviour, by means of among others customer satisfaction surveys; management information systems and tracing systems.
- Customer complaints should be utilised to improve on service delivery. Therefore, colleges should implement a functional system to manage such complaints.
- Students' records and enrollment figures can be used to forecast trends.

Systems should allow for teamwork at Colleges

- Diverse cross-functional teams should remain operational at colleges to ensure that the benefits of synergy are obtained and shared.
- Flexible procedures regarding selection of cross-functional team members must be developed and implemented.
- Sharing of information and rendering assistance across divisions should be encouraged.
- Diversity of thinking and the development of new ideas that challenge conventional ways of doing things should be encouraged.
- Diversity in various specialisation fields should be encouraged, thus promoting innovation due to cross-pollination of ideas (Sadler, 2000: 31).
- The forming of intra-organisational networks, both formal and informal, should be encouraged. This could result in pooling of resources and knowledge (Stevenson & Jarillo, 1990: 25).
- A balance must be struck between individualism and collectivism, since both extremes would be counterproductive to intrapreneurship. According to Morris *et al.* (1994: 84), "the key is to balance individual initiative with the spirit of cooperation and group ownership of innovation".

Systems should allow for effective communication channels

- Open communication channels do exist at colleges, although it can be improved upon.
- Top management must ensure that a clear and common purpose as articulated in the entrepreneurial strategy is communicated to all employees and especially to middle management (Van der Merwe & Oosthuizen, 2008: 17).

Systems should ensure rapid implementation of new processes and increased responsiveness

- Systems must be revisited to ensure swift implementation of innovative processes, which would make increased levels of responsiveness possible.
- Responsiveness would be increased by forming partnerships and joint ventures with both private and public stakeholders. In this fashion colleges would be enabled to identify market needs pre-emptively and exploit opportunities.
- Flexibility in terms of modes of service delivery would enable colleges to cater for a broader spectrum of clients and could facilitate new product development.

Rewarding system

- A balance must be struck between the fact that public FET college employees do not personally assume responsibility for financial risk and the fact that the rewards they can receive for innovative practices have finite limits.
- Employees should be appropriately recognised and rewarded in relation to their job performance and the value added to the organisation (Van der Merwe & Oosthuizen, 2008: 17).
- The evaluation system used to measure performance should reinforce intrapreneurial behaviour (Jacobs & Kruger, 2001: 5).
- Reward should be a function of the level of individual performance and the attainment of performance objectives.

- Flexibility should be built into the reward system due to the fact that the changes occur on a continuous basis in the operational environment of the organisation (Timmons & Spinelli, 2007: 299).
- A remuneration system comprising a mixture of fixed salary and incentives is proposed (Kuratko *et al.*, 2001: 62).
- An equity position in a new venture could be used to reward intrapreneurs (Hisrich *et al.*, 2007: 49).

Systems should ensure easy access to resources

- Processes and procedures to access resources should be simplified.
- Policies should be revisited to streamline processes and procedures.
- Capital should be made available in advance to kick-start intrapreneurial efforts.
- Bootstrapping, i.e. doing more with less, should be encouraged.
- Up-to-date technology should be employed to increase productivity levels, having taken into consideration financial restraints. Whenever new technology is employed, staff should be afforded the necessary training.

Systems should encourage idea generation and innovation

- Idea generation should be encouraged, for instance by means of suggestion boxes and brain storming sessions. Staff that came up with innovative ideas that are implemented successfully should be given recognition.
- Rules and procedures at colleges should be flexible, allowing for innovative practices.
- Employees should be allowed discretionary time during working hours to develop ideas and carry the project to fruition.
- “Turf” protection that inhibits the successful implementation of new processes should not be allowed (Hisrich *et al.*, 2007: 48).
- Innovation should be included in leadership development programmes (Van der Merwe & Oosthuizen, 2008: 17).

Recruitment system

- More young professionals should be lured into FET Colleges.
- Time and money should be invested in recruiting employees with an entrepreneurial mindset.
- Recruitment processes should emphasize the attaining of a diverse workforce that would allow organisations to respond better to the needs of complex markets.

Research and Development System

- Research and development units at colleges should be established to ensure high level environmental scanning processes. This will assist managers to cope with uncertainty and lower the risk of intrapreneurial ventures. This is especially important for public FET colleges, since public funding is involved.

Cross-functional teams and networking systems

- Employees should be encouraged to work together in cross-functional teams to facilitate information sharing.
- Cross-functional teams should have freedom in electing team members.
- Managers should spell out mandates of cross-functional teams and limit interference thereafter.
- Networks and alliances with other stakeholders should be established.

5.3.6 Skills

Skills include unique capabilities of staff as a whole. The following guidelines regarding entrepreneurial skills for public FET college employees are presented:

- Colleges must continue to provide opportunities for growth and learning to their employees.

- Staff development interventions should focus on fostering:
 - Strategic thinking abilities;
 - Good networking skills- in the political as well as the external arena;
 - Risk-taking abilities;
 - Boosting self-confidence and emotional intelligence;
 - Ability to tolerate ambiguity;
 - Lateral thinking skills;
 - Ability to adapt to change;
 - Leadership skills, and
 - Innovation and creativity.

5.3.7 Style

This element includes the managerial style, cultural style and the climate in the organisation indicating the “way we do things around here”. The following practical guidelines are offered:

Managerial style

- Supervisors should be encouraged to look after their own well-being to ensure high energy levels and optimistic dispositions.
- A participative management style should be adopted. Teamwork should be encouraged and supervisors should not enforce ideas on teams. An approach of consensus building should be utilised (Timmons & Spinelli, 2007: 541).
- Supervisors should communicate strategically and include a multiplicity of stakeholders in their deliberations in order to ensure transparency.
- Entrepreneurial leadership should be based on expertise and not authority. Therefore, supervisors should be encouraged to develop themselves on a continuous basis.
- A champion system should be implemented at colleges to assist intrapreneurs to get their work done.

Organisational climate and culture

- A culture of high performance should be established that includes mindsets, practices and results. Aligned mindsets result in operational practices that lead to outstanding results and outcomes in the organisation (Thomas *et al.*, 2007: 1). Practices and procedures must be clear to all employees.
- Intrapreneurship should be ingrained within all levels at colleges and form part of the core culture (Ireland *et al.*, 2003: 1).
- Supervisors' fear of losing control over employees who are intrapreneurial should be put to rest.
- Devolution of power or "entrepreneurial autonomy" should be emphasised, allowing employees more freedom to manage their budgets and their projects (Bellone & Goerl, 1992: 131). This freedom should include accountability.
- Intrapreneurial freedom should exist whereby employees are encouraged to express their ideas and are taken seriously by management.
- Employees should be empowered; they should be trusted and allowed to feel they are part of the creative process.
- A problem-solving culture through-out the College should be fostered.
- Political in-fighting for positions should not be allowed to interfere with intrapreneurship.
- Good governance should be ensured since public entrepreneurs use public funding for their projects. Transparency in service delivery is therefore paramount.

5.3.8 Staff

This concept refers to the demographics' description of personnel in the College, i.e. job designations; number of staff in each category and so forth. Top management should put in place a human resource plan that includes inter alia:

- Capacity planning;
- Succession planning;

- Post designations;
- Equity targets;
- Remuneration system; and
- Staff development.

5.3.9 Guidelines regarding external environment of public FET colleges

To reconcile the limitations imposed on the colleges by government and the encouragement of pro-active, intrapreneurial behaviour patterns within these institutions, poses a major challenge to management and governance structures alike. The following guidelines are presented regarding the external environment of public FET colleges:

- **Multiplicity of constituencies**

The public entrepreneur has a multiplicity of constituencies that must be consulted prior to strategy formulation. This fact should be taken into consideration when time frames are determined for implementing strategies. It is furthermore of paramount importance that managers at FET colleges build strong networks and alliances with constituencies.

- **Rigid systems and legislative framework**

Managers in the public FET sector operate within a rigid system that governs funding allocations, recruitment and selection practices and employee rewards. Limitations are imposed by legislative or regulatory statute regarding operations. Since colleges would still have to operate within these parameters, management and employees alike would be required to be exceptionally creative when embarking on intrapreneurship within the institutions.

5.4 ACTION PLAN

In section 5.4 an action plan is proposed to facilitate the fostering of an intrapreneurial climate within public FET colleges. The plan is aligned to the recommendations made and includes specific activities, time lines, key performance areas (KPIs), as well as managers responsible for executing these activities.

5.4.1 Action plan to facilitate the fostering of an intrapreneurial climate within public FET Colleges

Strategic Objective: To foster an intrapreneurial climate within the College				
Activity:	Task Owners	Methods and Tools	Time frame	Standard/KPI
Give feedback to top management on findings of study and recommendations made.	Researcher	Workshop (Powerpoint presentation).	January to February 2009	Top management fully informed about findings of study.
Sharing of information with all staff: - Feedback on findings of study and urgency for change to intrapreneurial culture; - Explain discrepancy between actual situation and desired state (create dissatisfaction with status quo).	Top management (Director and Deputy-Directors)	Staff meetings at all campuses.	March 2009	All stakeholders fully informed about: - Findings of study; - Imminent changes that must occur; and - Reasons for the change to an intrapreneurial culture.
Revisit the vision and mission to ensure intrapreneurial end-results are articulated clearly in statements.	Council Management team	Brainstorming sessions; Delphi technique; Use consultant as facilitator; and/or Workshops.	April to May 2009	Vision and mission aligned to intrapreneurial constructs.
Revisit corporate values and get buy-in from employees: - Obtain synergy on all levels by encouraging participation on levels; - Identify three-to-five dominant values based on inputs received.	Line managers Council Top management	Brainstorming sessions; Focus groups; Divisional meetings; Suggestion boxes; and/or Questionnaires. Meeting.	June to July 2009 End July 2009	Values aligned to intrapreneurial constructs. Aligned-commitment of all staff. Alignment of all different value systems into 3 – 5 dominant values.
Revisit strategic plan to ensure incorporation of intrapreneurial constructs: Obtain inputs from employees at all levels.	Line managers	Brainstorming sessions; Divisional meetings.	August to September 2009	Strategic plan aligned to intrapreneurial constructs. Aligned-commitment from all employees.

Finalise strategic plan.	Council College management team	Workshop.	End September 2009	Final strategic plan in place.
Change organisational structure to a decentralised structure.	Council Top management	Workshop.	October 2009	Flat organisational structure that allows for: • Decentralised decision-making; • Participation from staff; • Innovation.
Ensure staff is well-informed about what is expected of them: • Revisit job descriptions and action plans.	Line managers	Meetings.	November to December 2009	Updated job descriptions and action plans aligned to strategic plan.
Formation of business units and/or cross- functional teams to pilot intrapreneurship at Colleges: • Identify team leaders; Identify champions for process. Jointly determine: • Development needs of team members; • Idea evaluation plan; • Resource allocation plan; • Finance plan; • HR plan; • Rewarding plan; and • Evaluation plan. Show support in way resources are allocated: • Emphasis placed on intrapreneurial processes: Use different approaches – skunk work and traditional work, bootstrapping, external investors.	Management team	Meetings; and Brainstorming sessions.	Ongoing as needed	Business units that are: • Responsive; • Focused on business and government clients; and • Providing off-site training.
Revisit communication system to ensure: • Re-reinforcement of value system on a continuous basis;	Corporate marketer	Vision, mission and values framed and put up through-out college. Values captured in all staff	Ongoing	Vision, mission and values are displayed through-out college; Are encapsulated in

Effective communication channels are in place- vertical, lateral and horizontal communication between all employees are possible.	Line managers Employees	diaries; on all corporate gifts and college stationery where applicable. Intranet; staff newsletter; formal meetings; informal meetings; one-on-one discussions; memorandums; suggestion boxes; website.	Ongoing	diaries and other promotional material. All staff duly informed about what is going on.
Build strong teams at the College: - Ensure procedures regarding recruitment of team members are flexible; - Encourage forming of networks – formal and informal.	Line managers	Meetings.	Ongoing	Cross-functional teams in place. Information is shared. Assistance is rendered. Networks are in place and functions effectively.
Establish a strong customer orientation: - Formation of alliances with business and industry; - Involvement of customers in programme development; - Tracking of customer needs and changes in buying behaviour.	Top management Corporate marketer Business unit managers Corporate marketer Marketing division Research division	Meetings. Questionnaires; and/or Focus groups. Internet; Government department publications; and College records.	Ongoing Once per year Ongoing – updated report to management August of each year	Alliances and networks formed. Customer satisfaction with programmes determined; Needs identified. Trends identified and communicated to top management and Council for decision-making purposes.
Revisit systems and procedures to ensure rapid implementation of new processes.	Management team	Group sessions.	January to February 2010	New processes implemented rapidly.
Revisit rewarding system to recognise and reward intrapreneurial behaviour: - Flexibility built in – a mixture of fixed salary and incentives; - Profit-sharing.	Council Top management	Meetings.	March 2010	Rewarding system in place to encourage intrapreneurial behaviour.

Public recognition for intrapreneurs.	Top management	Staff meetings; Intranet; Memorandums; Staff newsletter; Certificates of recognition.	Ongoing	Timeous recognition is given for intrapreneurial behaviour that added value.
Provision of resources: - Processes and procedures to access resources simplified; - Bootstrapping should be encouraged.	Council Top management Line managers	Meetings.	April 2010	Policies and procedures simplified and aligned to legislative prescriptions.
Put systems in place to encourage idea generation and development: - Build flexibility into rules and procedures; - Allow for discretionary time to develop ideas during working hours.	Management team	Brain storming sessions; Workshops.	April 2010	Flexible systems in place.
Recruitment and selection: Focus on recruiting employees with an intrapreneurial mindset.	HR division	Advertisements; Screening process; and Interview process.	Ongoing	Intrapreneurial staff recruited.
Staff development: Training interventions aimed at intrapreneurial skill development	SDF	Skills audit; Gaps analysis; Training plan drafted. Interventions. Evaluation of effectiveness.	May 2010 and then January of each year As per plan Upon completion of training and three months thereafter repeated.	Audit completed. Analysis completed. Plan developed and approved. Interventions took place Evaluations done.
Assessment and evaluation system revisited to incorporate intrapreneurial behaviour patterns: - KPI s aligned; - Assessments.	Line managers and employees Line managers	PDMS and IQMS systems. Meetings with employees.	July 2010 Twice per year	Evaluation criteria aligned to intrapreneurial climate constructs. Evaluations completed.

5.5 CRITICAL EVALUATION OF THE STUDY

Evaluation of the success of this study is based on the attainment of the research objectives as indicated in section 1.3.

5.5.1 Primary objective

The primary objective of this study was to assess the level of intrapreneurship within four public FET colleges in the Free State province of South Africa and to make recommendations on the fostering of a climate of intrapreneurship within these institutions.

The primary objective was achieved firstly by attaining the secondary objectives of the study and secondly by putting forward a framework of guidelines and an action plan in sections 5.3 and 5.4 respectively.

5.5.2 Secondary objectives

The following secondary objectives for the study were set:

- To define intrapreneurship with special emphasis on the public sector;
- To obtain insight into the dynamics of intrapreneurship in the public sector;
- To assess the current intrapreneurial climate within four public FET colleges in terms of 13 constructs of intrapreneurship;
- To determine practically important relationships between ratings of managers on a personal level versus ratings of their supervisors in terms of 30 entrepreneurial characteristics;
- To examine the relationship between five demographic variables, i.e. age, gender, race, academic qualification, management level and the constructs of intrapreneurship;
- To validate the reliability of the measuring questionnaire;

- To suggest practical recommendations on the fostering of an intrapreneurial climate within public FET colleges; and
- To develop a framework of guidelines and an action plan that would facilitate the fostering of an intrapreneurial climate within the colleges.

The first two objectives were attained by means of a comprehensive literature study as presented in chapter three. The remainder of the objectives, apart from the last two, was achieved by means of the empirical study. The findings of the study were discussed in detail in chapter four.

The final two secondary objectives, i.e. to make practical recommendations and to put forward a framework of guidelines and an action plan, were achieved by combining findings of the empirical study with information gathered in the literature study. The recommendations and framework were presented in section 5.3, followed by an action plan in section 5.4.

5.6 SUGGESTIONS FOR FUTURE RESEARCH

Based on the findings of the study, the following suggestions are put forward for consideration pertaining future research on intrapreneurship in the public FET sector in South Africa:

- As the scope of the study was limited to lower, middle and senior management at public FET colleges in the Free State province, staff members such as educators on post level one and support staff were excluded. The opinions of post level one educator staff and administrative staff members should be included in future studies on this topic.
- This study focused only on FET colleges in the Free State and this cannot be considered to be representative of all South African FET colleges. Future research should include FET colleges from other provinces as well.

- In this study relationships were determined between a number of demographic variables and the intrapreneurial climate constructs. Further research is needed to determine the effect of factors peculiar to the public sector on the fostering of intrapreneurial climates within FET colleges.

5.7 SUMMARY

Embracing intrapreneurship within public FET Colleges would enable these institutions to expand their service delivery and fulfil their mandate as presented in the FET Act 16 of 2006.

Public FET Colleges would have to embark on a recruitment campaign to lure more young, professionally qualified educators and managers into the sector. Furthermore, it is imperative that the institutions put measures in place to ensure that sufficient financial and other resources are available for intrapreneurial projects. Additional funding would have to be sourced, emphasising the importance of forming networks and alliances with business and industry and other external stakeholders.

Systems and processes should be revisited and adapted to ensure adherence to the requirements of an intrapreneurial climate. Cumbersome procedures must be simplified to facilitate the rapid implementation of new processes.

Teamwork, and especially cross-functional teamwork, should be emphasised and expanded. Employees must be encouraged to share their knowledge and skills with one another, while embarking on a process of life-long learning.

In order to foster an intrapreneurial climate within colleges, a holistic approach is recommended. The vision, mission, corporate values and strategies should all embrace the quest for intrapreneurship. A flat organisational structure to ensure responsiveness and open communication channels would facilitate the fostering of an intrapreneurial climate.

Instilling a climate of intrapreneurship within the four FET colleges in the Free State would not be without challenges. The colleges still operate within the parameters of the public sector with concomitant challenges and constraints.

To ensure that these four colleges are able to fulfill the vision of the Department of Education for the FET College sector, i.e. *“A modern and vibrant nationally co-ordinated FET College system that builds a foundation for lifelong learning and is responsive to the needs of the 21st century”*, fostering and embracing an intrapreneurial climate would seem the natural strategic choice.

BIBLIOGRAPHY

ACTS see SOUTH AFRICA.

ANON. 2008a. Entrepreneurship: Lessons for leaders.

<http://www.accenture.com/entrepreneurship>. Date of access: 9 Feb. 2008.

ANON. 2008b. Entrepreneurship: Rethinking the role of the entrepreneurial leader.

<http://www.accenture.com/entrepreneurship>. Date of access: 9 Feb. 2008.

ANON. 2008c. The new FET colleges' funding norms in a nutshell. (Presentation at FS DoE Conference.) 15 February 2008. 9 p.

ANON. 2000. How can big companies keep the entrepreneurial spirit alive? *Harvard Business Review*, 16(2):183-192, Nov.-Dec.

ANTONCIC, B. & HISRIC, R.D. 2001. Intrapreneurship: construct refinement and cross-cultural validation. *Journal of Business Venturing*, 16(5):495-527.

ANTONCIC, B. & HISRIC, R.D. 2003. Clarifying the intrapreneurship concept. *Journal of Small Business and Enterprise Development*, 10(1):7-24.

ANTONCIC, B. & HISRIC, R.D. 2004. Corporate entrepreneurship contingencies and organizational wealth creation. *Journal of Management Development*, 23(6):518-550.

BARRINGER, B.R. & BLUEDORN, AC. 1999. The relationship between corporate entrepreneurship and strategic management. *Strategic Management Journal*, 20(5): 421-444

BARZALAY, M. 1992. Breaking through bureaucracy – a new vision for managing in government. Oxford: University of California Press. 237 p.

BELLONE, C.J. & GOERL, G.F. 1992. Reconciling public entrepreneurship and democracy. *Public Administration Review*, 52(2):130-134.

BHARDWAJ, B.R. & MOMAYA, K. 2006. Role of organizational flexibility for corporate entrepreneurship: case study of Fedex Corporation. *Global Journal of Flexible Systems Management*, 7(1/2):37-44.

BORINS, S. 1998. Innovating with integrity: how local heroes are transforming American government. Washington: Georgetown University Press. 385 p.

BORINS, S. 2000. Loose canons and rule breakers, or enterprising leaders? Some evidence about innovative public managers. *Public Administration Review*, 60(1):498-507.

BORINS, S. 2002. Leadership and innovation in the public sector. *Leadership & Organization Development Journal*, 28(3):467-476.

BOYETT, I. 1997. The public sector entrepreneur: a definition. *International Journal of Entrepreneurial Behaviour and Research*, 3(2):77-92.

BROWN, T.E., DAVIDSON, P. & WIKLUND, J. 2001. An operationalization of Stevenson's conceptualization of entrepreneurship as opportunity-based firm behavior. *Strategic Management Journal*, 22(10):953-968.

BURNS, P. 2004. Corporate entrepreneurship: building an entrepreneurial organisation. Basingstoke: Palgrave MacMillan.

COHEN, J. 1988. Statistical power analysis for behavioural sciences. 2nd ed. Hillsdale, NJ: Erlbaum.

COOPER, D.R. & SCHINDLER, P.S. 2003. Business research methods. 8th ed. New York, NY: McGraw-Hill. 310 p.

COVIN, J.G. & MILES, M.P. 1999. Corporate entrepreneurship and the pursuit of competitive advantage. *Entrepreneurship: Theory & Practice*, 23(3):47-63.

COVIN, J.G. & SLEVIN, D.P. 1991. A conceptual model of entrepreneurship as firm behaviour. *Entrepreneurship: Theory & Practice*, 16(1):7-25.

CUMMINGS, T.G. & WORLEY, C.G. 2005. Organization Development and Change. 8th ed. Mason: Thompson South-Western. 694 p.

DEPARTMENT of Education see SOUTH AFRICA.

DESS, G. G., LUMPKIN, G. T. & MCGEE, J. 1999. Linking corporate entrepreneurship to strategy, structure, and process: suggested research directions. *Entrepreneurship: Theory & Practice*, 23(3):85-102.

DHLIWAYO, S. 2007. The relationship between the practice of strategic planning and the levels of corporate entrepreneurship in South African public companies. Pretoria: UP. (Dissertation – Ph.D) 258 p.

DHLIWAYO, S. & VAN VUUREN, J.J. 2007. The strategic entrepreneurial thinking imperative. *Acta Commerci*:123-134.

DU PLOOY, G.M. 1995. Introduction to communication: communication research. Kenwyn: Rustica. 200 p.

ECHOLS, A.E. & NECK, C.P. 1998. The impact of behaviours and structure on corporate entrepreneurial success. *Journal of Managerial Psychology*, 13(1/2):38-46.

ELLIS, S.M. & STEYN, H.S. 2003. Practical significance (effect sizes) versus or in combination with statistical significance (p-values). *Management Dynamics*, 12(4): 51 – 53.

EMS NETWORK INTERNATIONAL. 2008. The seven principles of breakthrough thinking. Internet: <http://www.emsnetwork.com/articles/sevenprinciples.htm>. Date of access: 11 February 2008.

FET COLLEGES BRANCH. 2008. National plan for FET colleges in South Africa. Report delivered at FET College Principals' Meeting at Birchwood Conference Centre on 17 April 2008. Boksburg. 62 p. (Unpublished.)

FLANAGAN, N. & FINGER, J. 2003. The management bible. Cape Town: Zebra Press: 622 p.

FREE STATE (South Africa). 2005. Guideline document in preparation of the development of the Free State provincial growth and development strategy. Bloemfontein. 31 p.

GARDNER, D.M. 1994. Marketing-entrepreneurship interface: a conceptualization. Westport: Quorum Books. 235 p.

GARVIN, D.A. & LEVESQUE, L.C. 2006. Meeting the challenge of corporate entrepreneurship. *Harvard Business Review*, 84(10):102-112.

GOOSEN, C.J., DE CONING, T.J. & SMIT, E. v.d.M. 2002a. The development of a factor based instrument to measure corporate entrepreneurship: a South African perspective. *South African Journal of Business Management*, 33(3):39-51.

GOOSEN, C.J., DE CONING, T.J. & SMIT, E. v.d.M. 2002b. Corporate entrepreneurship and financial performance: the role of management. *South African Journal of Business Management*, December 33(4):21-28

GUPTA, V., MACMILLAN, I.C. & SURIE, G. 2004. Entrepreneurial leadership: developing and measuring a cross-cultural construct. *Journal of Business Venturing*, 19(2):241-260, Mar.

GUTH, W.D. & GINSBERG, A. 1990. "Guest editors" introduction: corporate entrepreneurship. *Strategic Management Review*, Special issue:5 – 15, Summer.

HITT, M.A., NIXON, R.D., HOSKISSON, R.E. & KOCHHAR, R. 1999. Corporate entrepreneurship and cross-functional fertilization: activation, process and disintegration of a new product design team. *Entrepreneurship Theory Practice*, 23(3):145-167, Spring.

HITT, M.A., IRELAND, R.D., CAMP, S.M. & SEXTON D.L. 2002. Strategic Entrepreneurship: Creating a new mindset. 1st ed. Oxford: Blackwell.

HISRIC, R.D. & PETERS, M.P. 2002. Entrepreneurship. 5th ed. Boston, Mass: McGraw-Hill. 663 p.

HISRIC, R.D., PETERS, M.P. & SHEPHERD, D.A. 2005. Entrepreneurship. 6th ed. New York: McGraw-Hill Irwin. 591 p.

HORNSBY, J.S., NAFFZIGER, D.W., KURATKO, D.F & MONTAGNO, R.V. 1993. An interactive model of the corporate entrepreneurial process. *Entrepreneurship Theory and Practice*, 20(2):29-37, Winter.

HUYSAMEN, G.K. 1994. Methodology for the social and behavioural sciences. Halfway House: Southern Book. 237 p.

IRELAND, R.D., KURATKO, D.F. & COVIN, J.G. 2003. Antecedents, elements and consequences of corporate entrepreneurship strategy. *Academy of Management Proceedings*, 1:L1-L6.

JACOBS, H. & KRUGER, S. 2001. Establishing an intrapreneurial orientation as strategy: A framework for implementation. *RAU Acta Commerci*, 1(1-11).

JENNINGS, D.F. & HINDLE, K. 2004. Corporate entrepreneurship and equifinality: an empirical analysis of strategy-structure-performance. *Academy of Management Proceedings*, 1:H1–H6.

KOTLER, P. & ARMSTRONG, G. 2007. Principles of Marketing. 12th ed. Upper Saddle River, NJ: Pearson Prentice Hall. 599 p.

KREITNER, R. & KINICKI, A. 2004. Organizational Behaviour. 6th ed. New York: McGraw-Hill. 710 p.

KURATKO, D.F., IRELAND, R.D. & HORNSBY, J.S. 2001. Improving firm performance through entrepreneurial actions: Acordia's corporate entrepreneurship strategy. *Academy of Management Executive*, 15(4):60-71.

KURATKO, D.F., MONTAGNO, R.V. & HORNSBY, J.S. 1990. Developing an intrapreneurial assessment instrument for an effective corporate entrepreneurial environment. *Strategic Management Journal*, 11(4):49–58, Summer.

LAMBING, P.A. & KUEHL, C.R. 2003. Entrepreneurship. 3rd ed. Upper Saddle River, NJ: Prentice-Hall. 331 p.

LEVINE, D.M., STEPHAN, D., KREHBIEL, T.C. & BERENSON, M.L. 2006. Statistics for managers using Microsoft Excel. 4th ed. Upper Saddle River, NJ: Pearson Prentice-Hall. 886 p.

- LLEWELLYN, N. & JONES, G.** 2003. Controversies and conceptual development: examining public entrepreneurship. *Public Management Review*, 5(2):245-266.
- LITTUNEN, H.** 2000. Entrepreneurship and the characteristics of the entrepreneurial personality. *International Journal of Entrepreneurial Behaviour & Research*, 6(6):295-309.
- MAAS, G. & HERRINGTON, M.** 2006. Global Entrepreneurship Monitor South African Report. Cape Town: UCT Business School. 79 p.
- MCGRATH, R.G. & MACMILLAN I.** 2000. The entrepreneurial mindset: strategies for continuously creating opportunity in an age of uncertainty. Boston, Mass.: Harvard Business School.
- MARCUS, M.H. & ZIMMERER, T.W.** 2003. A longitudinal study of the impact of intrapreneurial programs in Fortune 500 firms. *Journal of Management Research*, 3(1):11-22.
- MEINTJES, A.J.** 2006. The determinants of total entrepreneurial activity: a spatial approach. Potchefstroom: NWU. (Dissertation: M. Com.) 161 p.
- MLAMBO-NGCUKA, P.** 2006. A catalyst for Accelerated and Shared Growth-South Africa (ASGISA). (Paper delivered as part of a media briefing at the Presidency on 6 February 2006.) Pretoria. 12 p. (Unpublished.)
- MORRIS, M.H. & JONES, F.F.** 1999. Entrepreneurship in established organisations: the case of the public sector. *Entrepreneurship: Theory and Practice*, 24(1):71-91.
- MORRIS, H.M., DAVIS, D.L. & ALLEN, J.W.** 1994. Fostering corporate entrepreneurship: cross-cultural comparisons of the importance of individualism versus collectivism. *Journal of International Business Studies*, 25(1):65-89.

MORRIS, M.H. & KURATKO, D.F. 2002. Corporate entrepreneurship. Orlando, FL: Harcourt College Publishers.

MOSHIGA, S.D. 2007. Social Entrepreneurial Development in the Tswane Metropolitan Municipality. Potchefstroom: NWU. (Dissertation - MBA.) 112 p.

NEL, P.A., RÄDEL, F.E., & LOUBSER, M. 1992. Researching the South African market. Pretoria: University of South Africa. 600 p.

NIVEN, P.R. 2003. Balanced scorecard for government and non-profit agencies. NJ: Wiley. 305 p.

NUTT, P.C. 2004. Expanding the search for alternatives during strategic decision making. *Academy of Management Executive*, 18(4).

OLMSTED, L. 2005. Non-stop innovation: how one company transforms its employees into entrepreneurs. *Inc. Magazine*, 34 p.

OOSTHUIZEN, J.H. 2003. Revolutionising economic growth in South Africa through entrepreneurial leadership. Potchefstroom: NWU. (Dissertation - MBA.) 132 p.

OOSTHUIZEN, J.H. 2006. An integrated framework to improve the entrepreneurial climate in South African mining industry. Potchefstroom: NWU. (Dissertation – Ph.D). 345 p.

OSBORNE, D. & GAEBLER, T. 1993. Re-inventing government: how the entrepreneurial spirit is transforming the public sector. Reading, Mass.: Addison-Wesley. 180p.

PEDERSEN, D. & HARTLEY, J. 2008. The changing context of public leadership and management: implications for roles and dynamics. *International Journal of Public Sector Management*, 21(4):327 – 339.

POWELL, L. & HALL, G. 2004. Quantitative overview of the further education and training college sector: The new landscape. <http://www.education.pwv.gov.za>. Date of access: 31 March 2008.

RAMACHANDRAN, K., DEVARAJAN, T.P. & RAY, S. 2006. Corporate Entrepreneurship: How? *The Journal for Decision Makers*, 31(1):85-97.

RAMAMURTI, R. 1986. Public entrepreneurs: who they are and how they operate. *California Management Review*, 28(3):142-158.

ROBINSON, M. 2001. The ten commandments of intrapreneurs. *Management*, 14(2):95-98, Dec.

SADLER, R.J. 2000. Corporate entrepreneurship in the public sector: the dance of the chameleon. *Australian Journal of Public Administration*, 59(2):25-43.

SARKAR, M.B., ECHAMBADI, R.A.J. & HARRISON, J.S. 2001. Alliance entrepreneurship and firm market performance. *Strategic Management Journal: Special issue on strategic entrepreneurship and entrepreneurial strategies for wealth creation*, 22(6/7):701-711.

SASOL. 2008. Sasol history.
http://www.sasol.com/sasol_internet/frontend/navigation.jsp Date of access: 17 July 2008.

SATHE, V. 2003. Corporate entrepreneurship: top managers and new business creation. Cambridge: Cambridge University Press. 387 p.

SHANE, S. 2004. Academic entrepreneurship- university spin-offs and wealth creation. Cheltenham: Elgar Publishing. 335 p.

SHARMA, P. & CHRISMAN, J.J. 1999. Reconciling the definitional issues in the field of corporate entrepreneurship. *Entrepreneurship: Theory and Practice*, 23(3):11-26.

SOUTH AFRICA. Department of Education. 1998. Preparing for the twenty-first century through education, training and work. Pretoria: Government Printer. 108 p. (WPB-1998)

SOUTH AFRICA. Department of Education. 1998. White paper for the transformation of further education and training. *Government gazette* 19281:56, 25 Sept. (WPJ-1998.)

SOUTH AFRICA. 1998. Further Education and Training Act 98 of 1998. Pretoria: Government Printer.

SOUTH AFRICA. 2006. Further Education and Training Act 16 of 2006. Pretoria: Government Printer.

SOUTH AFRICA. Department of Education. 2007. Further education and training colleges: technical report on the national examination results. Pretoria: Government Printer. 92 p.

SOUTH AFRICA. 2008. National Plan for Further Education and Training Colleges in South Africa. *Government gazette*, 31712. Pretoria: Government Printer. 55 p.

SOUTH AFRICA. 1998. Skills Development Act. Pretoria: Government Printer.

SOUTH AFRICA. Department of Labour. 2001. Skills Development Strategy 2001 to 2005. Pretoria: Government Printer.

SOUTH AFRICA. Department of Labour. 2005. Skills Development Strategy II 2006 to 2010. Pretoria: Government Printer.

SOUTHERN AFRICA TOURISM ASSOCIATION. 2008.

http://www.places.co.za/hfree_statemap.html Date of access: 17 July 2008.

SOUTH AFRICA.INFO GATEWAY TO THE NATION. 2008. The Free State province.

<http://www.southafrica.info/about/geography/free-state.htm> Date of access: 17 July 2008.

STATS SOUTH AFRICA. 2001. Census 2001: Stages in the life cycle of South Africans: (Report No. 03-02-46).

<http://www.statssa.gov.za/census01/censusnewboundaries/> Date of access: 3 July 2008.

STATS SOUTH AFRICA. 2001. Primary Tables Free State: Census 1996 and 2001 compared. <http://www.statssa.gov.za/census01/> Date of access: 3 July 2008.

STEVENSON, H.H. & JARILLO, J.C. 1990. A paradigm of entrepreneurship: entrepreneurial management. *Strategic Management Journal*, 11(Special issue):17-27, Summer.

STEYN, H.S. (jr.). 2002. Practically significant relationships between two variables, *SA Journal of Industrial Psychology*, 28(3):10-15.

STOPFORD, J.M., & BADEN-FULLER, C.W.F. 1994. Creating corporate entrepreneurship. *Strategic Management Journal*, 15(7):521–536.

STRUWIG, F.W. & STEAD, G.B. 2004. Planning, designing and reporting research. Cape Town: Pearson Education South Africa. 279 p.

SWART, H.C. 2005. Evaluation of the factors that ensures long-term sustainability of family businesses. Vanderbijlpark: NWU. (Dissertation - MBA.) 168 p.

SWART, P.J. 2005. Unique challenges facing family businesses. Vanderbijlpark: NWU. (Dissertation - MBA.) 183 p.

TAMBWE, M.S. 2005. Corporate entrepreneurship and its environmental determinants. Potchefstroom: NWU. (Dissertation – MBA.) 119 p.

THOMAS, R.J., HARBURG, F. & DUTRA, A. 2007. How to create a culture of high performance. *Accenture*. [http:// www. accenture.com/entrepreneurship](http://www.accenture.com/entrepreneurship) Date of access: 9 Feb. 2008.

TIMMONS, J.A. & SPINELLI, S. 2007. New venture creation: entrepreneurship for the 21st century. 7th ed. New York: McGraw-Hill. 658 p.

THOMBERRY, N. 2001. Corporate entrepreneurship: antidote or oxymoron. *European Management Journal*, 19(5):526-533.

TORDOFF, W. & YOUNG, R.A. 1994. Decentralisation and public sector reform in Zambia. *Journal of Southern African Studies*, 20(2):285-299.

VAN DER MERWE, S.P. 1998. Formele beplanning in familie ondernemings in die Vaaldriehoek. Potchefstroom: North-West University. (Dissertation - PhD.) 320 p.

VAN DER MERWE, S.P. & ELLIS, S.M. 2007. An exploratory study of some of the determinants of harmonious family relationships in small and medium-sized family businesses. *Management Dynamics*, 16(4):24-35.

VAN DER MERWE, S.P & OOSTHUIZEN, J.H. 2008. The entrepreneurial climate in the South African mining industry: a middle management perspective. Potchefstroom Business School, North-West University (Unpublished).

VON BROEMBSSEN, M., WOOD, E. & HERRINGTON, M. 2005. Global Entrepreneurship Monitor South African Report. Cape Town: UCT Business School. 56 p.

VENKAT, R. 2003. The Corporate Entrepreneur. *Siliconindia*, 7(1):56.

WELMAN, C., KRUGER, F. & MITCHELL, B. 2005. Research methodology. 3rd ed. Cape Town: Oxford University Press.

WINBORG, J. & LANDSTRÖM, H. 2001. Financial bootstrapping in small businesses: examining small business managers' resource acquisition behaviors. *Journal of Business Venturing*, 16 (1):235–254.

WRIGHT, M., CLARYSSE, B., MUSTAR, P. & LOCKETT, A. 2007. Academic Entrepreneurship in Europe. Northampton: Edward Elgar Publishing. 228 p.

ZAHRA, S.A. & BOGNER, W.C. 2000. Technology strategy and software new venture performance: exploring the moderating effect of the competitive environment. *Journal of Business Venturing*, 15(2):135-173.

ZAMPETAKIS L.A. & MOUSTAKIS, V. 2007. Entrepreneurial behaviour in the Greek public sector. *International Journal of Entrepreneurial Behaviour & Research*, 13(1): 19-38.

ZHAO F. 2005. Exploring the synergy between entrepreneurship and innovation. *International Journal of Entrepreneurial Behaviour and Research*, 11(1):2.

ZERBINATI, S. & SOUITARIS, V. 2005. Entrepreneurship in the public sector: a framework of analysis in European local governments. *Entrepreneurship and Regional Development*, 17(4):43-64.

ANNEXURE A

Code number:

M/01

INTRAPRENEURIAL CLIMATE QUESTIONNAIRE

CONFIDENTIAL

Note: All responses are confidential and neither the individual nor the organisation would be identified in any report or release.

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INTRAPRENEURIAL CLIMATE QUESTIONNAIRE

Dear Respondent

The public sector tends to be bureaucratic by nature with long decision making channels. Corporate entrepreneurship (intrapreneurship) with concomitant creativity and high rates of responsiveness is not its preferred mode of operation. However, to render an effective service to enable South Africans to become more competitive globally, the public sector would need to rethink its processes and procedures.

Some research have been conducted regarding corporate entrepreneurship in the public sector, but as indicated in literature such as the *Global Entrepreneurship Monitor South African Report* (Von Broembsen, Wood & Herrington, 2005:65) further research is needed. The emphasis should be on the establishment of business models, processes and structures in the public sector so as to increase the level of corporate entrepreneurship in the various departments and sections.

The focus of this research study is public Further Education and Training (FET) Colleges that were earmarked by government to spearhead the alleviation of skills shortages in the country. The Further Education and Training Act (16/2006) grants FET Colleges more autonomy to decide on their programme offerings and staff establishments. In short, FET Colleges should be managed like business enterprises. As a result, Councils and management teams must put models and strategies in place to change current bureaucratic corporate cultures that are slow to respond to those that are entrepreneurial, innovative and competitive.

This questionnaire attempts to measure the intrapreneurial climate in your College in order to determine whether it is conducive to foster an intrapreneurial spirit, as well as to indicate possible barriers or trigger factors. Your contribution is highly valued and appreciated.

Please complete every question / statement to ensure the validity and reliability of the study.

GENERAL INSTRUCTIONS

Virtually all questions may be answered by ticking (X) or ☐ the relevant block.

Use the following key to indicate your preference:

SCALE	TERM USED
5	Strongly agree
4	Slightly agree
3	Neither agree nor disagree
2	Slightly disagree
1	Strongly disagree

Please select the number which best describes your opinion about a specific question or statement. In the example beneath, the respondent slightly agreed to the statement listed.

		Strongly Disagree	Slightly Disagree	Neither agree nor disagree	Slightly agree	Strongly Agree
A03	My manager helps me to get my work done by removing obstacles in my way.	1	2	3	☒	5

SECTION A: INTRAPRENEURIAL CLIMATE

The questionnaire consists of 65 statements. Please indicate to what extent you agree or disagree with each statement. Please mark the applicable block with a cross (X) or ☐ it.

		Strongly Disagree	Slightly Disagree	Neither agree nor disagree	Slightly Agree	Strongly Agree
A01	Our leaders take a long-term view of our college.	1	2	3	4	5
A02	Management encourages us to develop ideas that would improve the college.	1	2	3	4	5
A03	My manager helps me to get my work done by removing obstacles in my way.	1	2	3	4	5
A04	Development at our college is based on taking calculated risks at the right time.	1	2	3	4	5
A05	Our college quickly implements improved work methods that are developed by employees.	1	2	3	4	5
A06	Individuals implementing successful innovative projects receive additional rewards and compensation.	1	2	3	4	5
A07	I am well informed about our organisational vision and strategies.	1	2	3	4	5
A08	An employee with a good idea is often given time to develop that idea within working hours.	1	2	3	4	5
A09	Working together in project teams is encouraged at the college.	1	2	3	4	5
A10	There are several options within the college for individuals to get financial support for their innovative projects and ideas.	1	2	3	4	5
A11	People are keen to share knowledge within the College, even over departmental or functional boundaries.	1	2	3	4	5
A12	A great deal of resources is spent in determining customer needs and satisfaction.	1	2	3	4	5
A13	People are allowed to make decisions about their work processes without going through elaborate justification and approval procedures.	1	2	3	4	5
A14	Our leaders challenge the status quo and they inspire us to think and act in innovative ways.	1	2	3	4	5
A15	Top management is receptive to my ideas and suggestions.	1	2	3	4	5
A16	Originators of new ideas find it easy to implement because of the support rendered by influential people at the college.	1	2	3	4	5
A17	Projects involving calculated risk are highly valued, even when things do not always turn out according to plan.	1	2	3	4	5
A18	There is considerable number of employees at the College that are involved in generating and implementing innovative ideas.	1	2	3	4	5
A19	In this college recognition rather than criticism is emphasised.	1	2	3	4	5
A20	I have regular meetings with my manager where information is shared between us.	1	2	3	4	5
A21	A staff member who has initiated a new project/process is allowed to carry it through to completion/implementation.	1	2	3	4	5
A22	We use cross-functional teams effectively at the college to develop and implement new ideas.	1	2	3	4	5
A23	Money is often available to get new project ideas off the ground.	1	2	3	4	5
A24	Employees are encouraged to talk to their colleagues in other departments of the college about ideas for new projects.	1	2	3	4	5
A25	Product and service innovation are driven by a strong customer orientation.	1	2	3	4	5

		Strongly Disagree	Slightly Disagree	Neither agree nor disagree	Slightly Agree	Strongly Agree
A26	Employees are given ample opportunity for independence and freedom in how they do their work.	1	2	3	4	5
A27	This organisation has a specific value system which we all know and live up to.	1	2	3	4	5
A28	Those employees who come up with innovative ideas on their own receive management's encouragement for their activities.	1	2	3	4	5
A29	Our organisation has people with influence that support, coach, protect, and find resources for an intrapreneurial project and its team.	1	2	3	4	5
A30	We occasionally take big risks to keep ahead of our competitors.	1	2	3	4	5
A31	This organisation provides me with the chance to be creative and try out new methods of doing my job.	1	2	3	4	5
A32	My supervisor will give me special recognition if my work performance is outstanding.	1	2	3	4	5
A33	Great effort has been made to clarify what the vision and strategy of the college mean to us in our own department.	1	2	3	4	5
A34	Nobody at the College is forced to develop new ideas.	1	2	3	4	5
A35	Top management encourages the establishment of teams from various departments whenever needed for a project.	1	2	3	4	5
A36	Resources are readily accessible in pursuance of new ideas and opportunities.	1	2	3	4	5
A37	Our college has open communication channels in which all employees participate.	1	2	3	4	5
A38	Our college involves customers in service and product development.	1	2	3	4	5
A39	I have autonomy to decide how to do my work.	1	2	3	4	5
A40	Our leaders lead by example and people are eager to voluntarily follow them.	1	2	3	4	5
A41	The creation of innovative ideas is a regular occurrence in our college.	1	2	3	4	5
A42	Our college's managers have the skills, commitment and courage to be effective champions of intrapreneurial initiatives.	1	2	3	4	5
A43	This college supports many small and experimental projects realising that some will undoubtedly fail.	1	2	3	4	5
A44	Training is provided to ensure that innovative new processes are implemented effectively.	1	2	3	4	5
A45	In this college effective intrapreneurs are generally rewarded.	1	2	3	4	5
A46	The vision and strategies of the college often help me in setting priorities in my work.	1	2	3	4	5
A47	I am allowed time at work to explore new ideas I believe have potential.	1	2	3	4	5
A48	Project teams have choices in recruiting and selecting new team members.	1	2	3	4	5
A49	The process for accessing and acquiring resources to pursue new opportunities is streamlined so that approval is quickly granted.	1	2	3	4	5
A50	Employees are encouraged to stay abreast of developments in their functional fields and to share their knowledge with others.	1	2	3	4	5
A51	We regularly ask our customers to give their opinions of our service and product offerings.	1	2	3	4	5
A52	The degree of hierarchical control is relatively low in our college.	1	2	3	4	5
A53	Our leaders seek to maximise value from opportunities.	1	2	3	4	5
A54	Senior managers allow innovators to bend rules and rigid procedures in order to keep promising ideas on track.	1	2	3	4	5
A55	In this college it is easy to build coalitions of sponsors to help projects succeed.	1	2	3	4	5
A56	If you make a mistake in this organisation you will be forgiven.	1	2	3	4	5

		Strongly Disagree	Slightly Disagree	Neither agree nor disagree	Slightly Agree	Strongly Agree
A57	Employees are inspired to push their boundaries and to think "out-of-the-box."	1	2	3	4	5
A58	Employees are rewarded in relation to their job performance.	1	2	3	4	5
A59	There is considerable buy-in from employees into the value system of the College.	1	2	3	4	5
A60	Our college provides ample opportunities for learning and growth.	1	2	3	4	5
A61	Cross-functional teams are characterised by diversity based on the skills required by the project.	1	2	3	4	5
A62	Attracting resource commitment for entrepreneurial ventures in this organisation is relatively easy.	1	2	3	4	5
A63	Employees are willing to assist others and share knowledge and skills even if it is not required of them.	1	2	3	4	5
A64	Customers are treated as very important stakeholders.	1	2	3	4	5
A65	Employees determine their key performance areas in co-operation with their supervisors.	1	2	3	4	5

SECTION B: CORE ATTRIBUTES OF ENTREPRENEURS

Self assessment and Supervisor assessment

Successful entrepreneurs have certain characteristics in common. Section B of the questionnaire is aimed at determining to what extent employees at FET Colleges are inclined towards an entrepreneurial mind. In section B1 you are requested to evaluate yourself on a scale from 1 to 5 in terms of how well each of the attributes or characteristics applies to you. In section B2 evaluate your supervisor on the same scale. Tick in the appropriate block or highlight the block.

Please be honest when completing the rating scale. Your responses remain anonymous and an over-inflation of how you view yourself and/or your supervisor will compromise the integrity of the survey.

SCALE	TERM USED
5	Definite strength
4	Moderate strength
3	Neither strength nor weakness
2	Moderate weakness
1	Definite weakness

B1 -Self-Assessment					Attribute/Characteristic	B2 -Supervisor Assessment				
Definite weakness	Moderate weakness	Neither strength nor weakness	Moderate strength	Definite strength		Definite weakness	Moderate weakness	Neither strength nor weakness	Moderate strength	Definite strength
1	2	3	4	5	High levels of commitment	1	2	3	4	5
1	2	3	4	5	High levels of creativity and innovativeness	1	2	3	4	5
1	2	3	4	5	High energy levels	1	2	3	4	5
1	2	3	4	5	Low support needs	1	2	3	4	5
1	2	3	4	5	Calculated risk-taker	1	2	3	4	5
1	2	3	4	5	High levels of perseverance	1	2	3	4	5
1	2	3	4	5	Ability to take responsibility	1	2	3	4	5
1	2	3	4	5	Problem solving skills	1	2	3	4	5
1	2	3	4	5	Capacity to inspire others	1	2	3	4	5
1	2	3	4	5	Self-reliance	1	2	3	4	5
1	2	3	4	5	Courageous	1	2	3	4	5
1	2	3	4	5	Self-confidence and optimism	1	2	3	4	5
1	2	3	4	5	Ability to manage ambiguity and uncertainty	1	2	3	4	5
1	2	3	4	5	Ability to see opportunities in the market place/opportunity orientation	1	2	3	4	5
1	2	3	4	5	Generosity	1	2	3	4	5
1	2	3	4	5	Integrity and reliability	1	2	3	4	5
1	2	3	4	5	Good people judgement	1	2	3	4	5
1	2	3	4	5	Patience	1	2	3	4	5
1	2	3	4	5	Able to adapt to changes	1	2	3	4	5
1	2	3	4	5	High levels of emotional stability	1	2	3	4	5
1	2	3	4	5	Self-awareness (of own strengths and weaknesses)	1	2	3	4	5

B1 -Self-Assessment					Attribute/Characteristic	B2 -Supervisor Assessment				
Definite weakness	Moderate weakness	Neither strength nor weakness	Moderate strength	Definite strength		Definite weakness	Moderate weakness	Neither strength nor weakness	Moderate strength	Definite strength
1	2	3	4	5	Quick learner that does not make mistakes twice	1	2	3	4	5
1	2	3	4	5	Able to conceptualise and sweat the details	1	2	3	4	5
1	2	3	4	5	Willing to undertake personal sacrifices	1	2	3	4	5
1	2	3	4	5	Self-starter (internal locus of control)	1	2	3	4	5
1	2	3	4	5	Low need for status and power	1	2	3	4	5
1	2	3	4	5	Restless with status quo	1	2	3	4	5
1	2	3	4	5	Drive to achieve and grow	1	2	3	4	5
1	2	3	4	5	Tolerance for failure	1	2	3	4	5
1	2	3	4	5	Open-minded lateral thinker	1	2	3	4	5

SECTION C: BACKGROUND INFORMATION

The following information is needed to help with the statistical analysis of data for comparisons among different interest groups. All your responses will be treated confidentially. Your assistance in providing this important information is appreciated.

Tick or highlight the applicable block.

C01	Indicate your age group	☐ ≤ 29	☐ 30 - 39	☐ 40 - 49	☐ 50 - 59	☐ 60+
------------	--------------------------------	-------------------------------	----------------------------------	----------------------------------	----------------------------------	------------------------------

C02	Indicate your gender	☐ Male	☐ Female
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C03	Indicate your race	☐ Black	☐ White	☐ Coloured	☐ Indian
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C04	Indicate your highest academic qualification	
	National Certificate	☐
	National Diploma	☐
	3-year Degree	☐
	Post Graduate qualification	☐

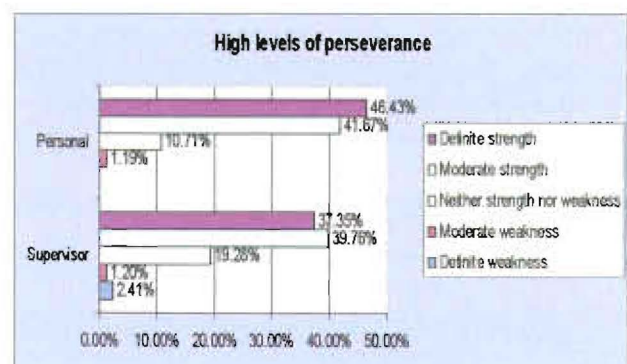
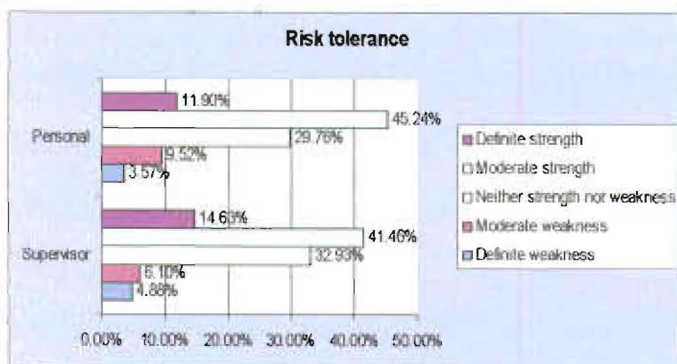
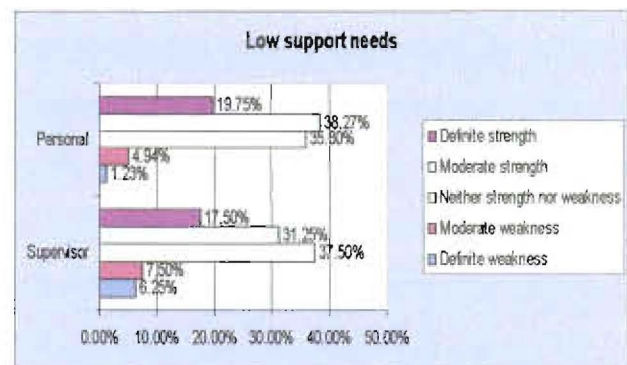
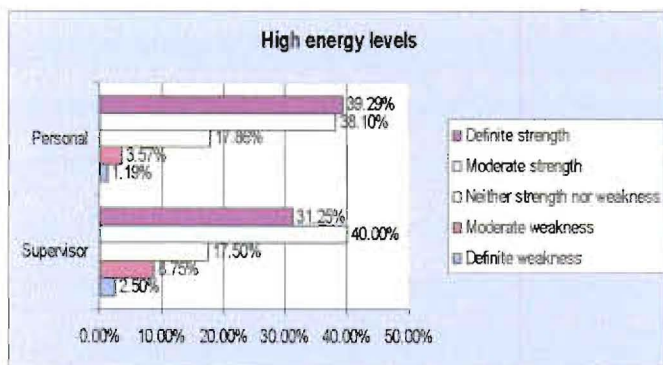
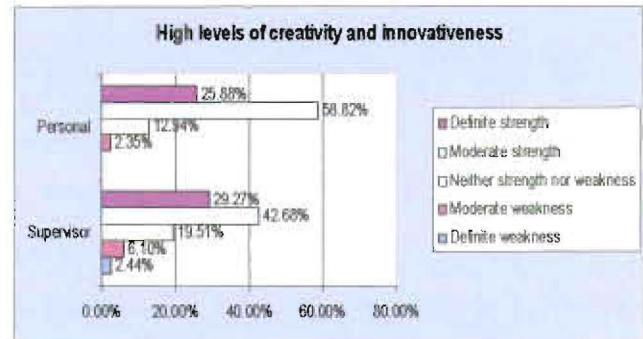
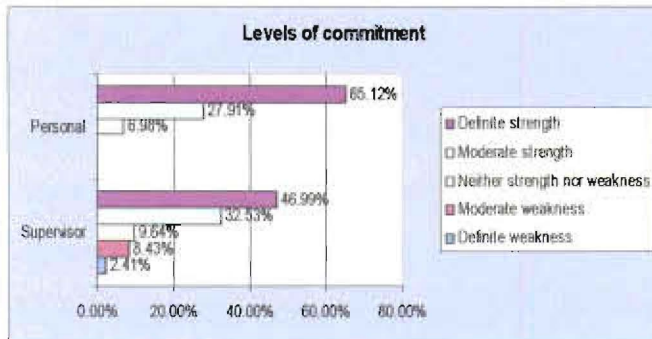
C05	Indicate your management level	Top management	Middle management	Lower management
		(PL 6 – 7/ Band 12 – 14)	(PL 4 – 5 / Band 10 -11)	(PL 2 – 3/ Band 7 -9)
	Other: (Specify):			

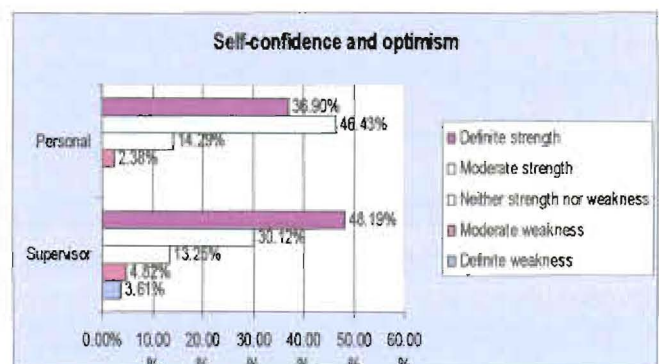
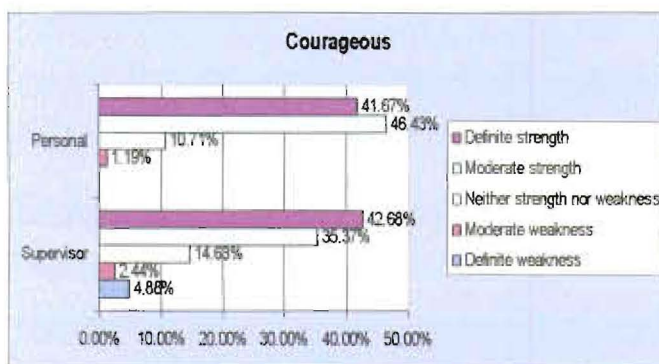
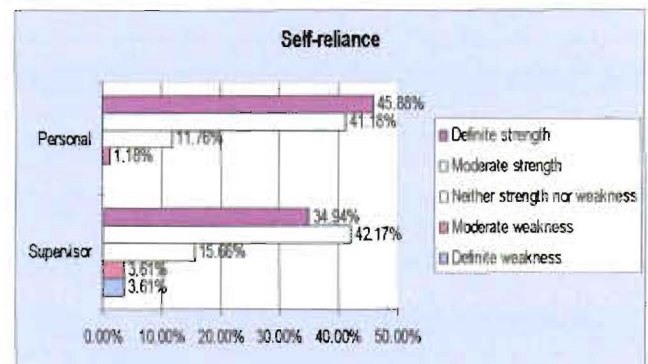
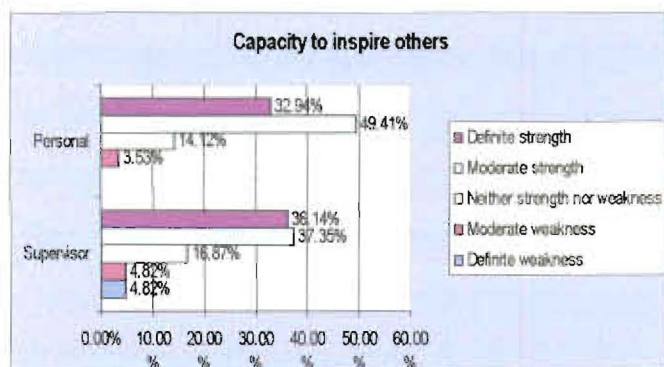
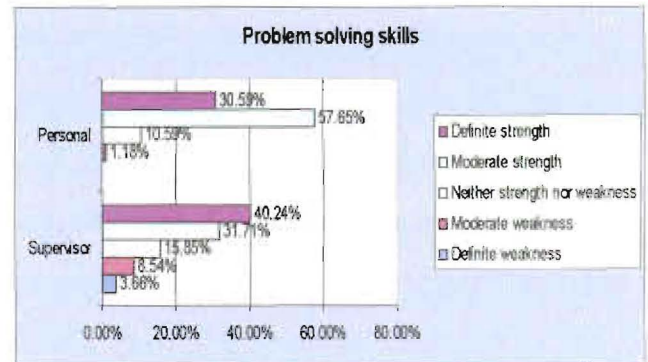
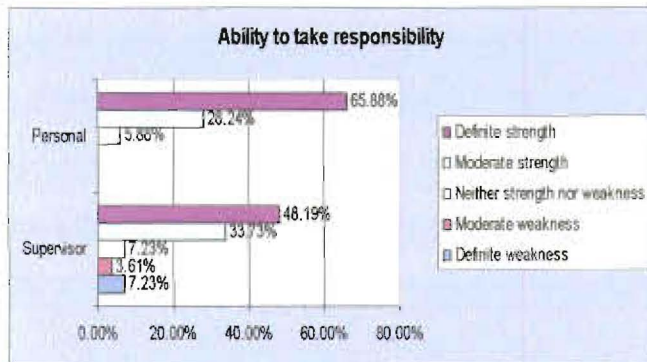
C06	Indicate your functional department				
	General Management	Marketing	Finance	Human Resources	Student Administration
	Student Services	Education and Training	Learnerships and Skills	Supply Chain Management	IT
	Quality Management	Health and Safety	Fundraising and Sponsorships		
	Other: (Specify):				

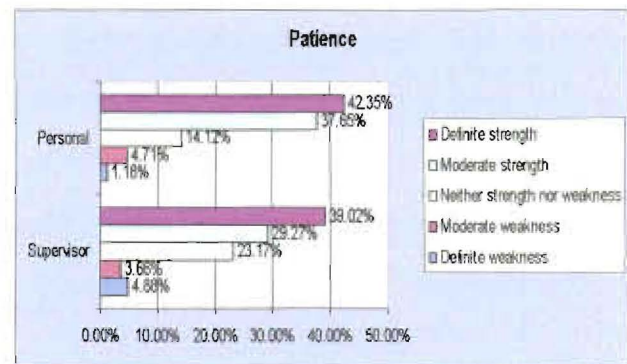
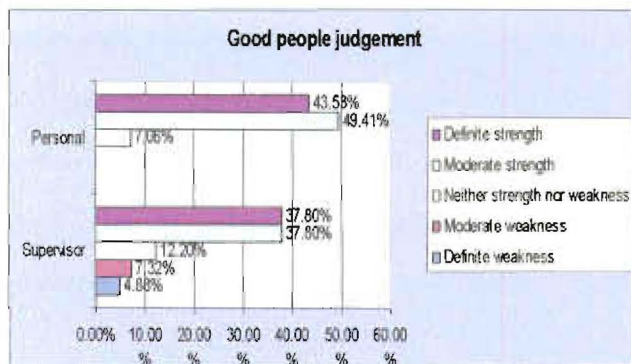
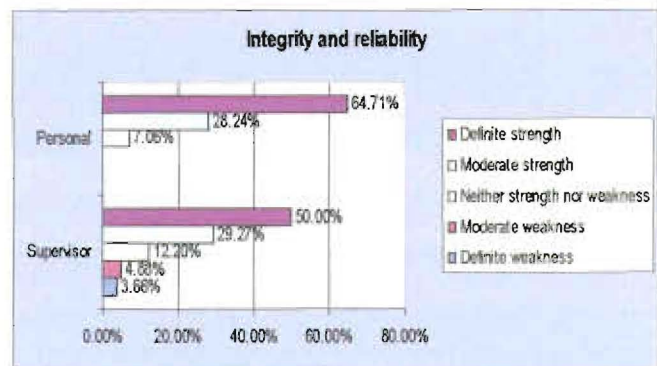
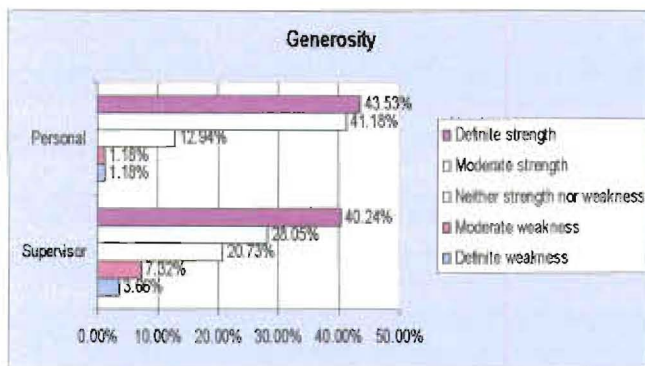
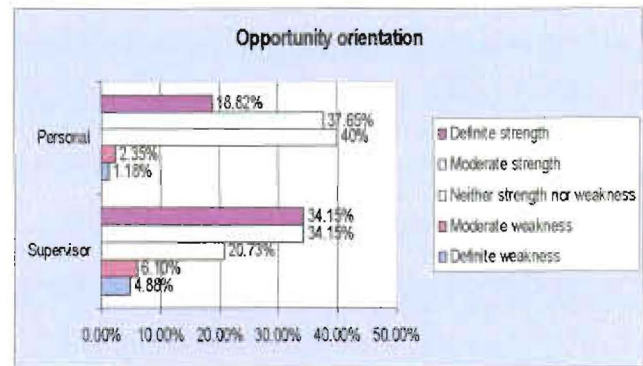
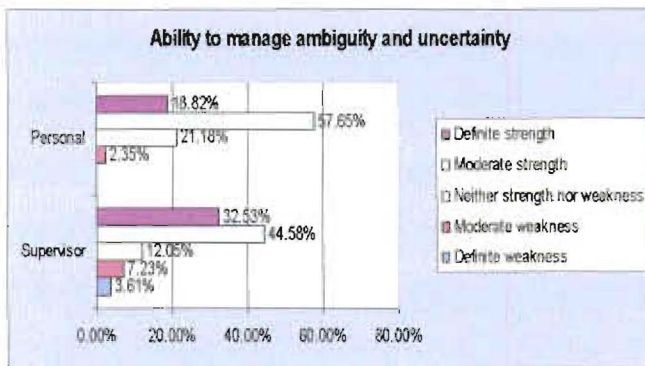
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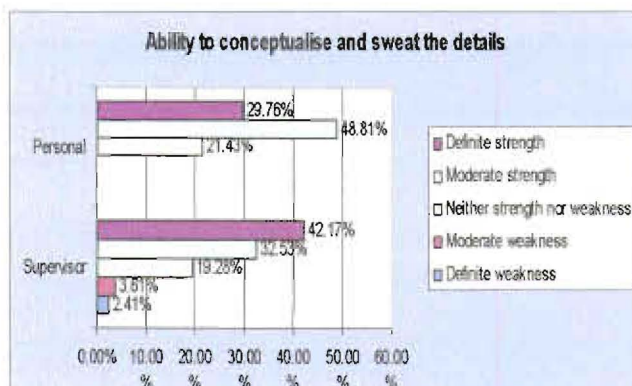
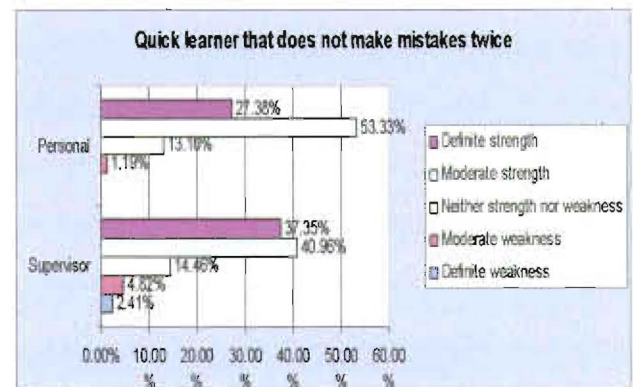
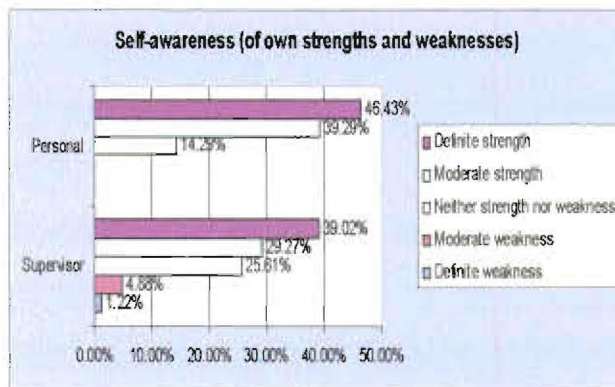
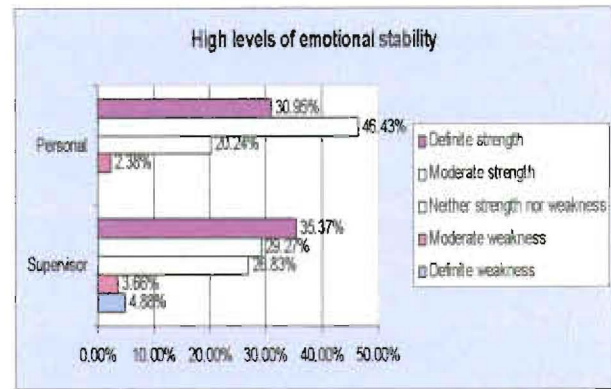
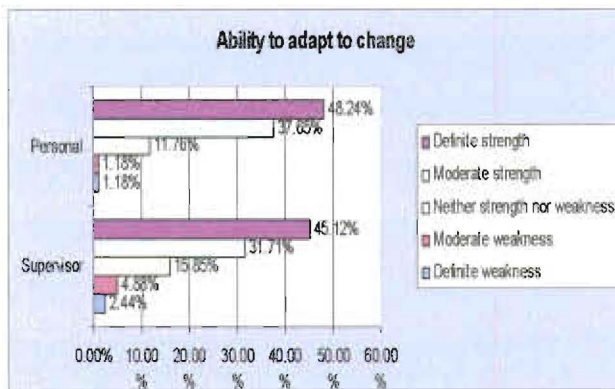
ANNEXURE B

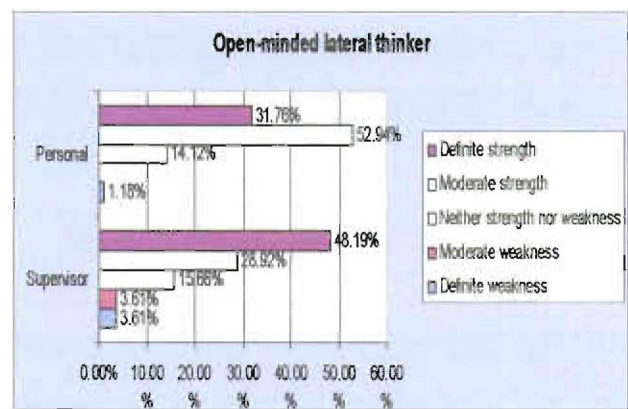
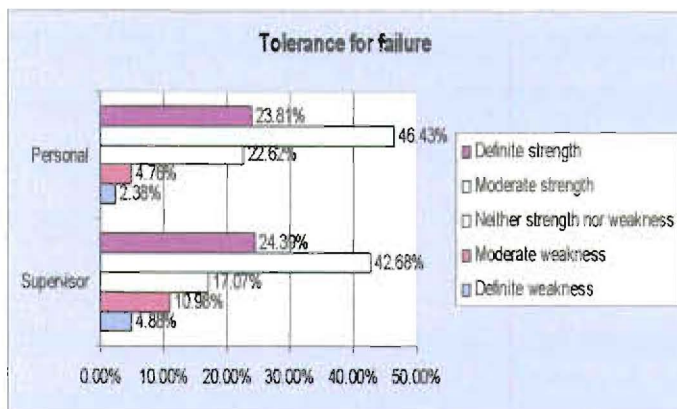
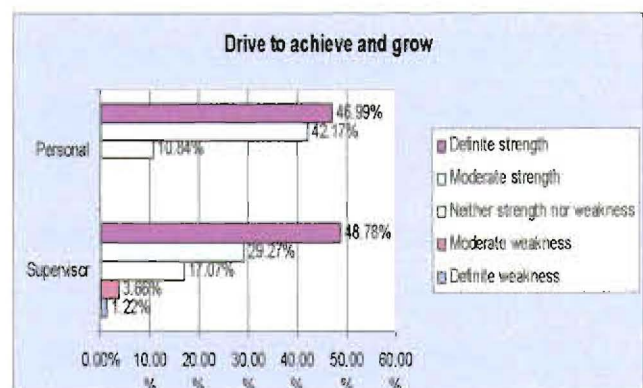
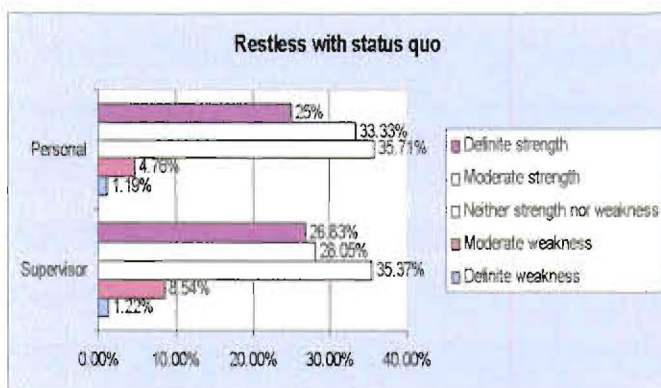
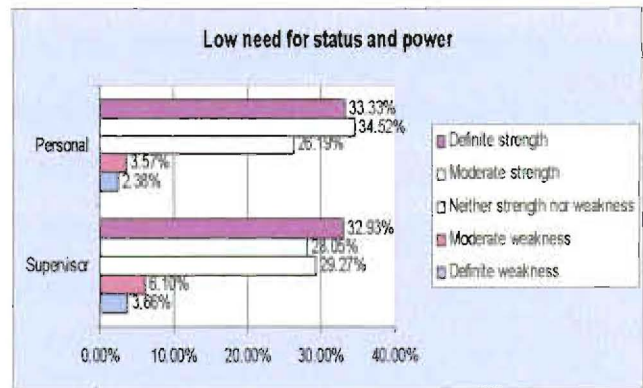
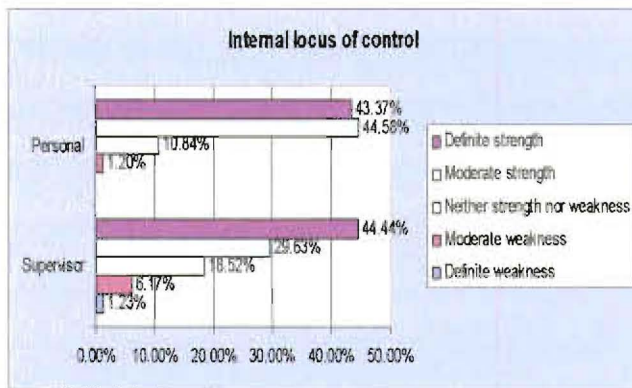
SURVEY RESULTS ON ENTREPRENEURIAL CHARACTERISTICS







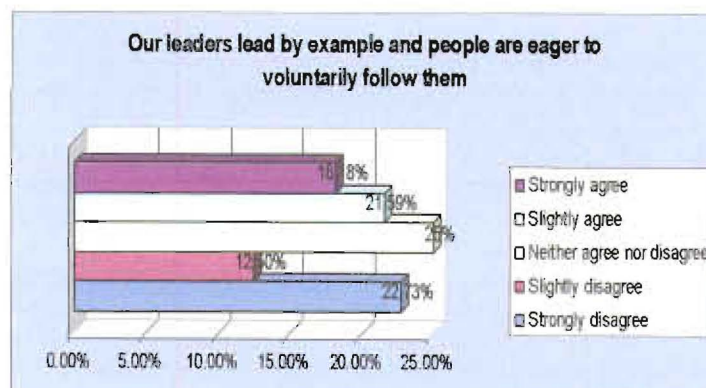
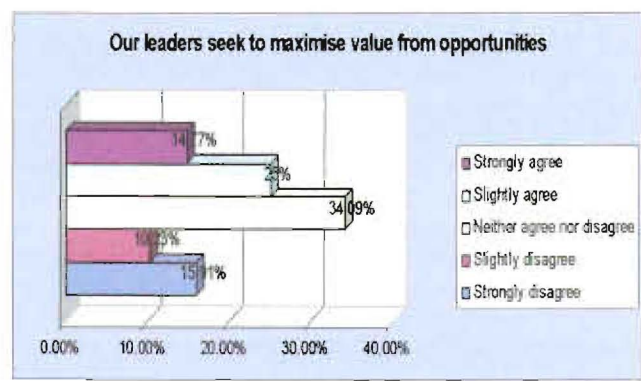
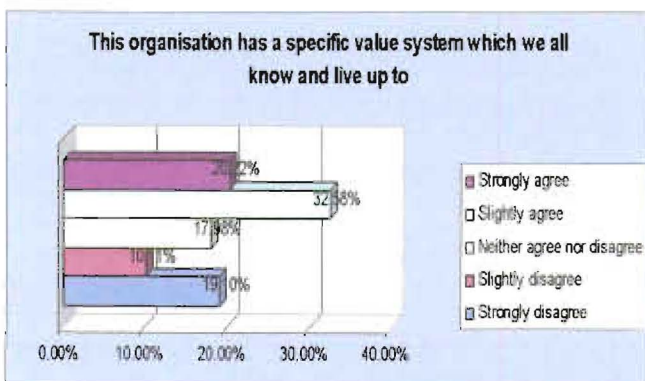
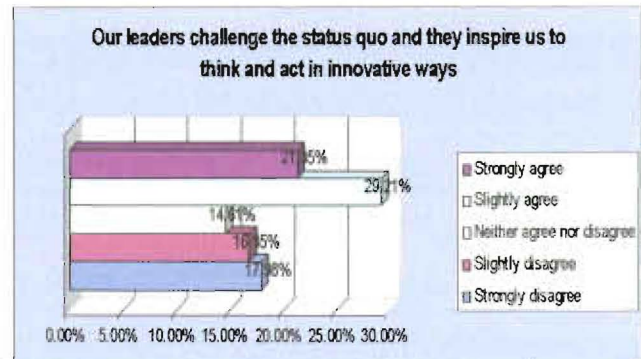
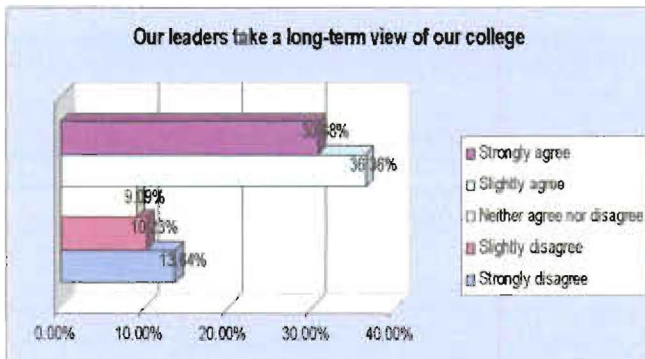




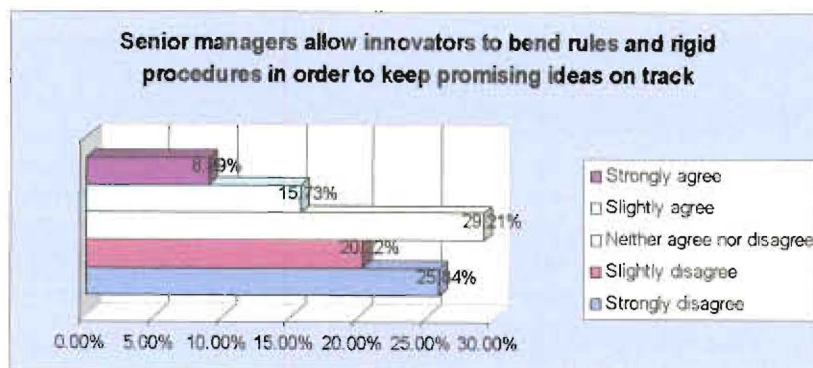
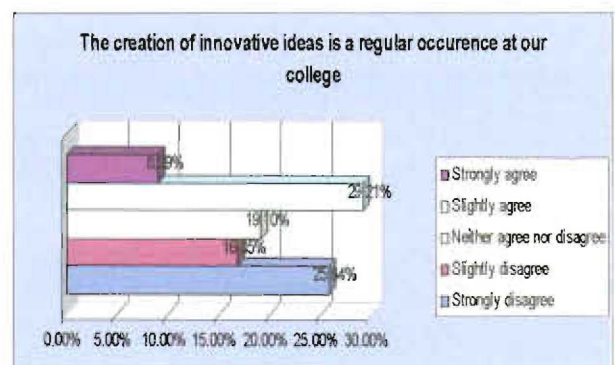
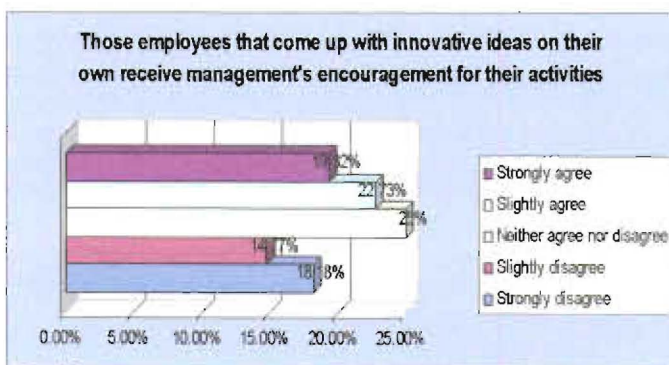
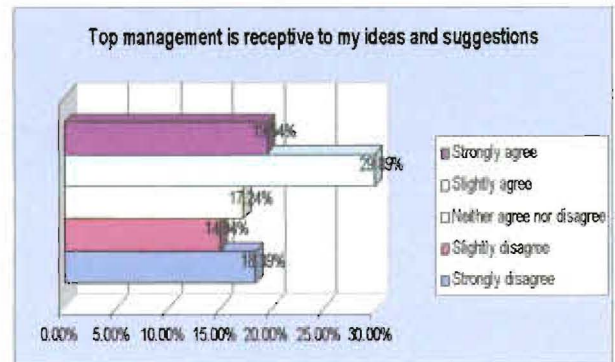
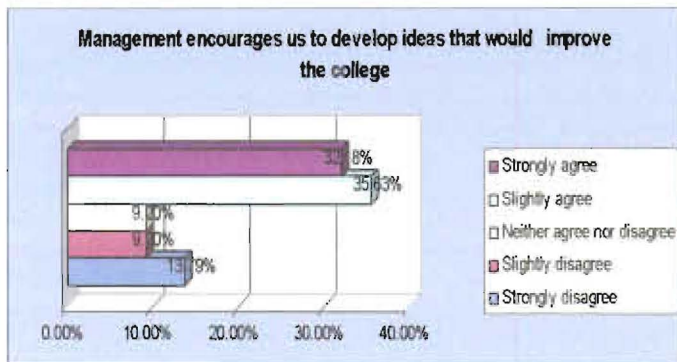
ANNEXURE C

SURVEY RESULTS ON INTRAPRENEURIAL CLIMATE CONSTRUCTS

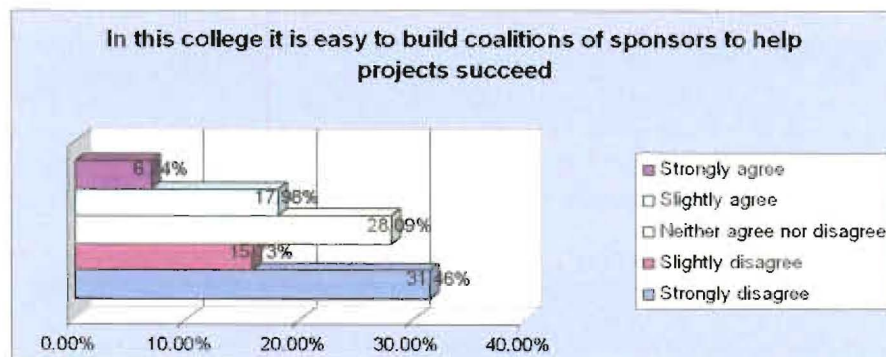
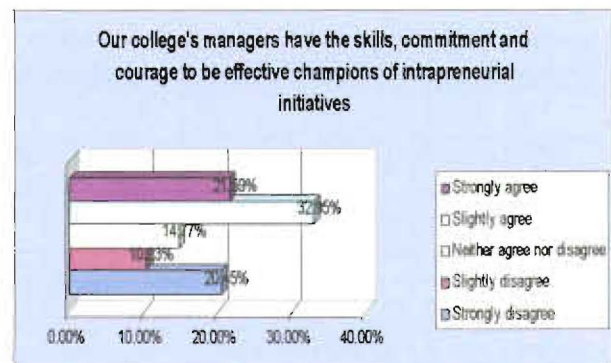
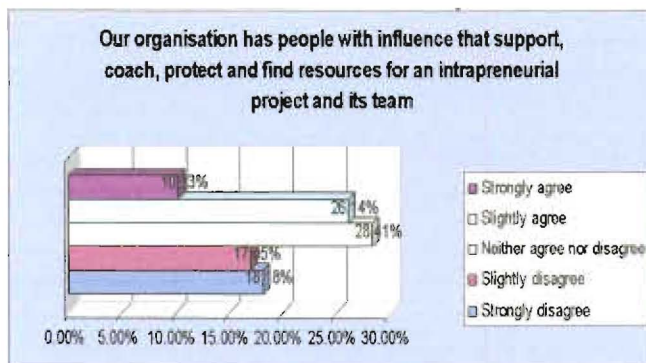
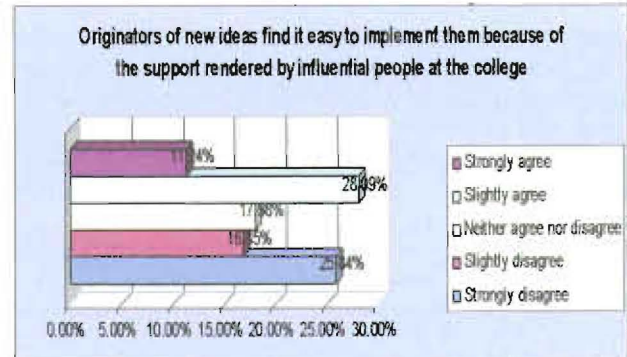
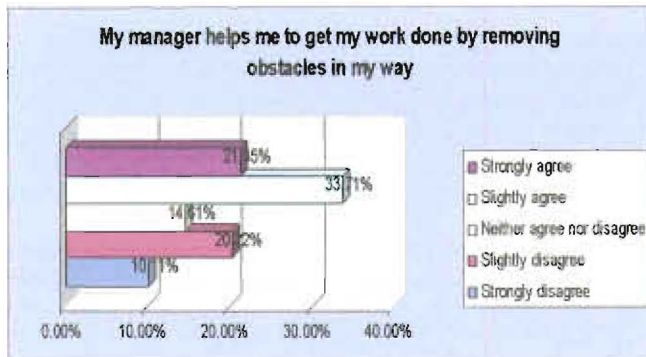
Construct 1: Inspirational leadership and a long term view



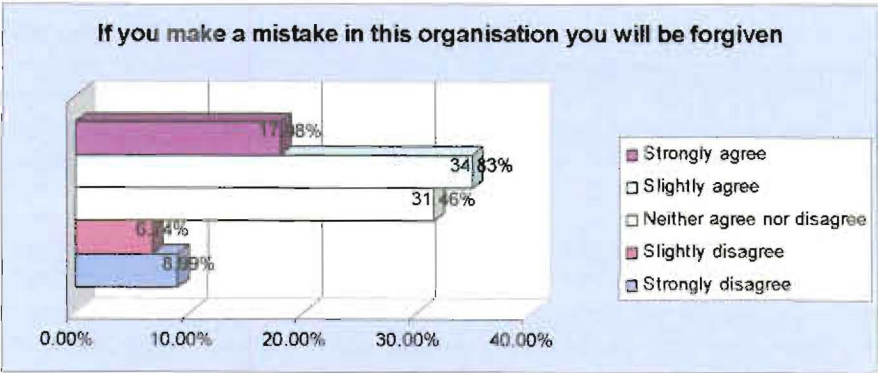
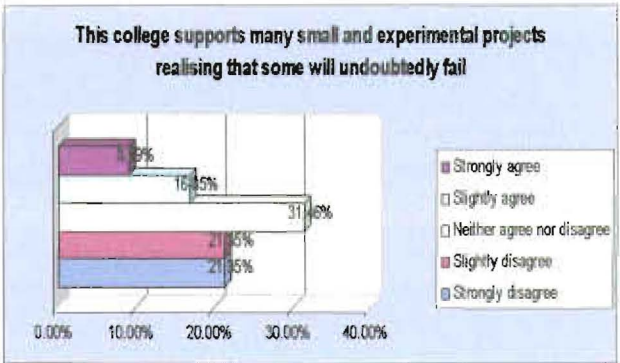
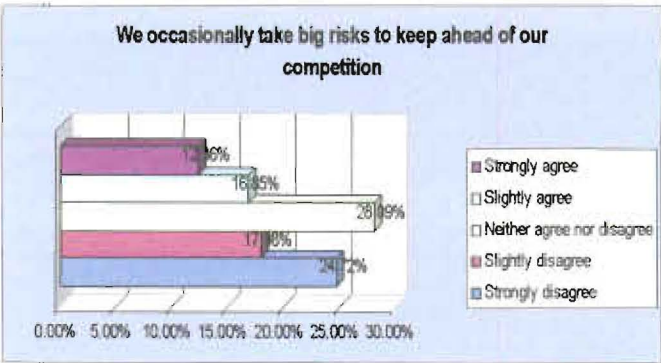
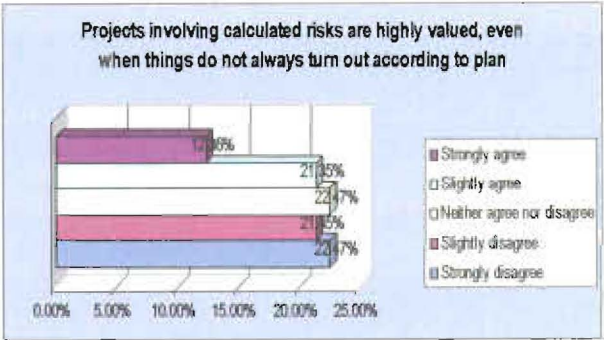
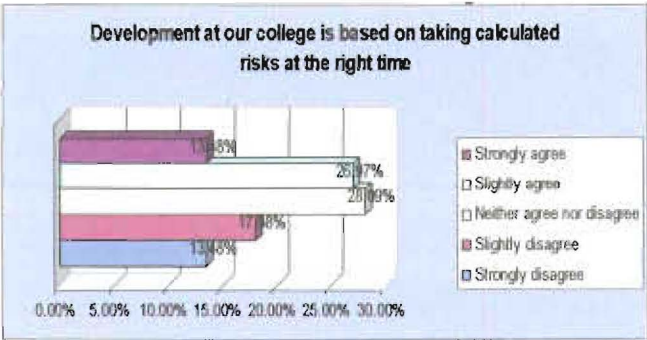
Construct 2: Encouragement of new ideas



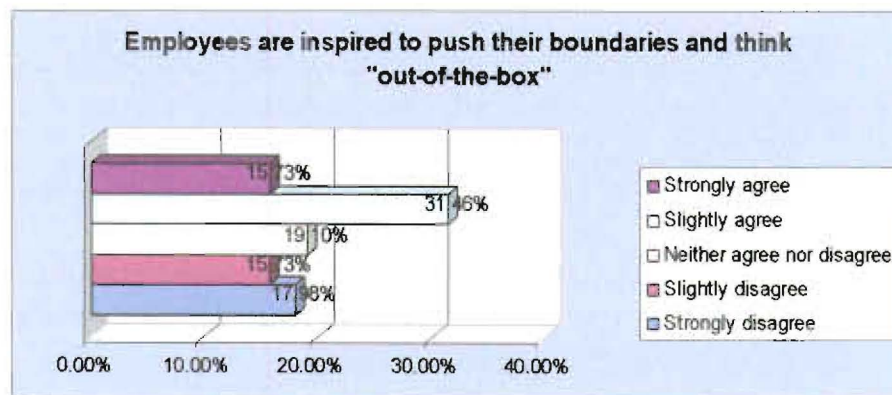
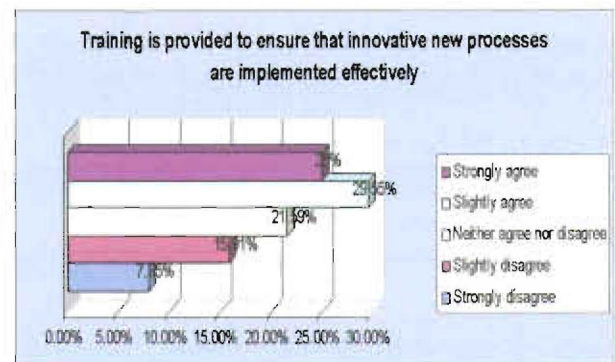
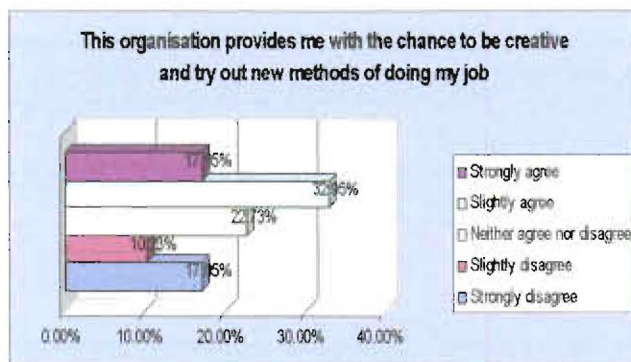
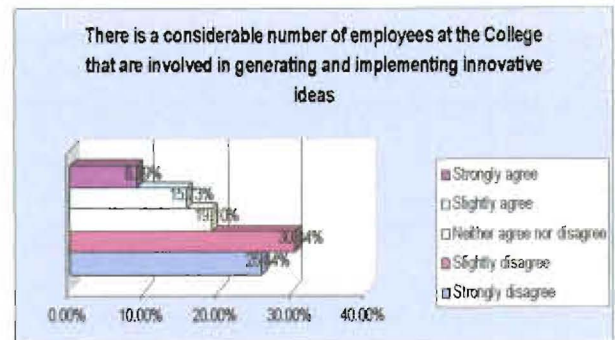
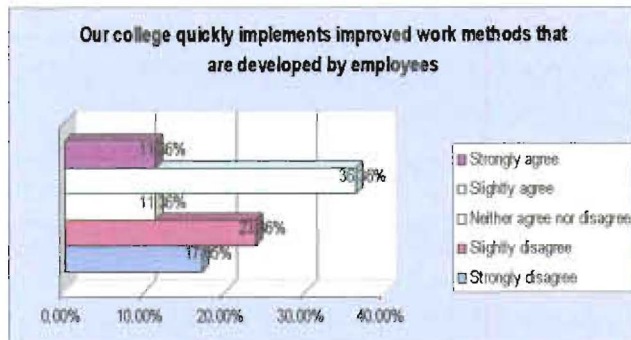
Construct 3: Support by management and champions



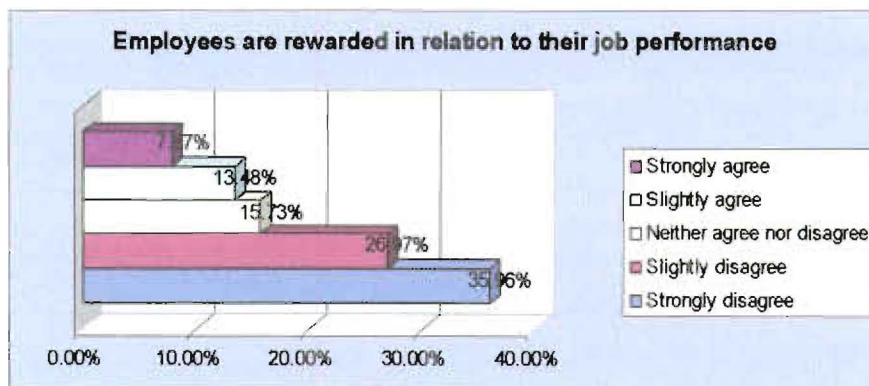
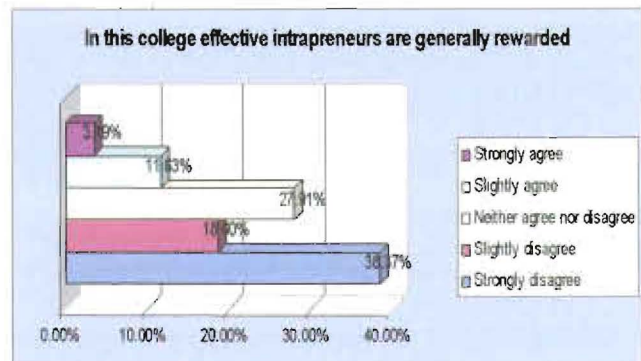
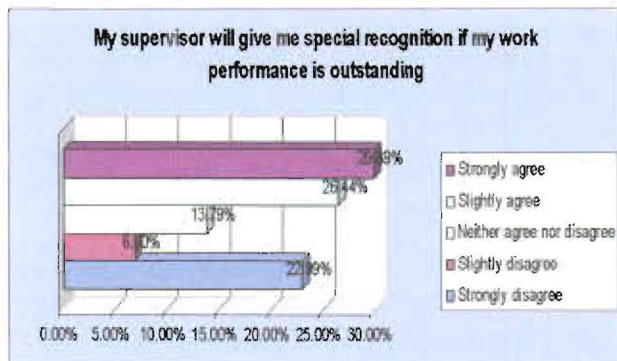
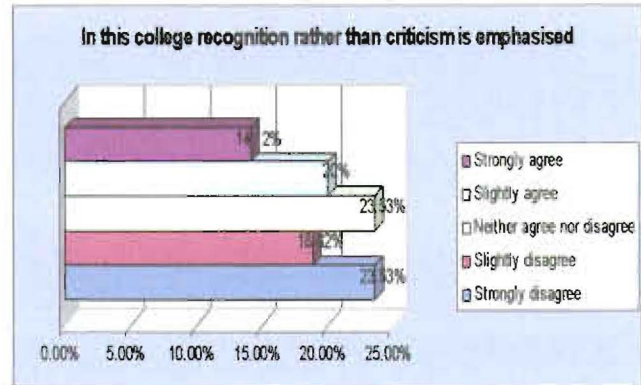
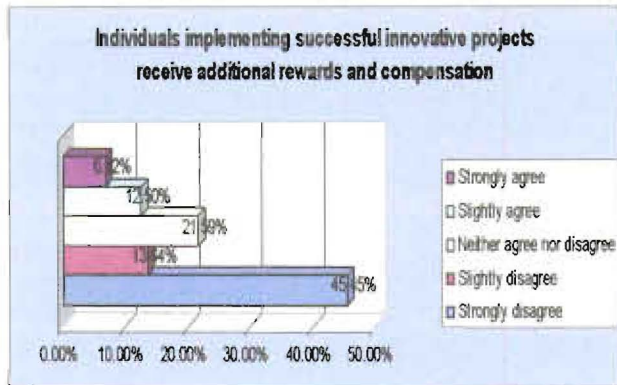
Construct 4: Tolerance for risks and failure



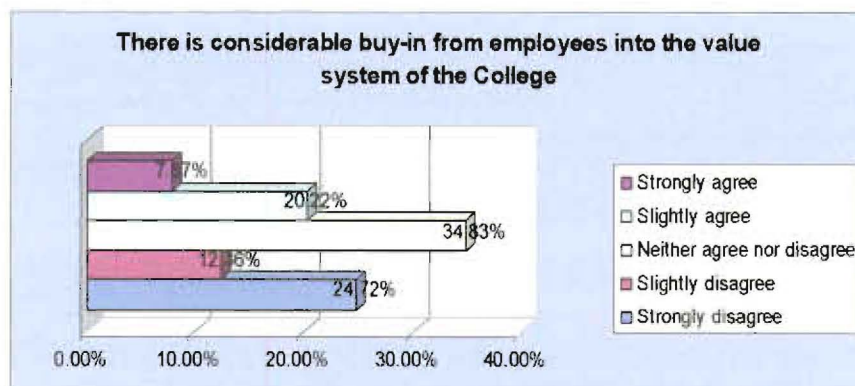
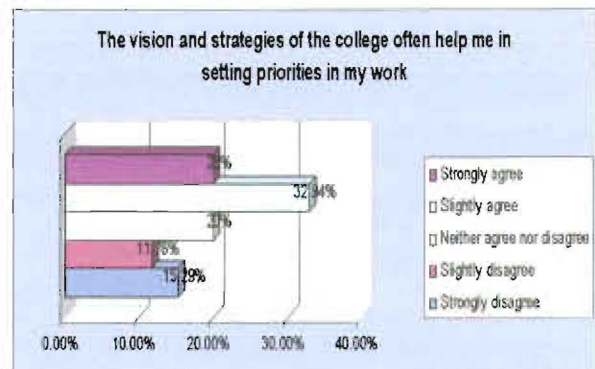
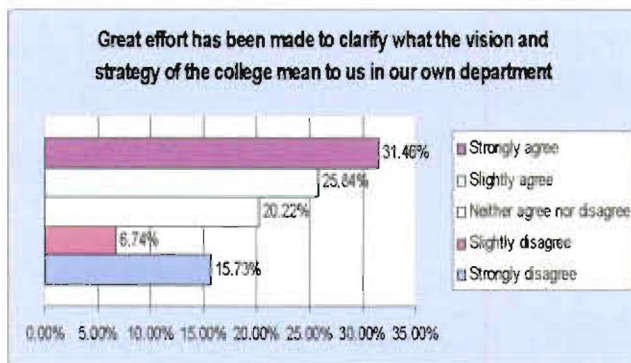
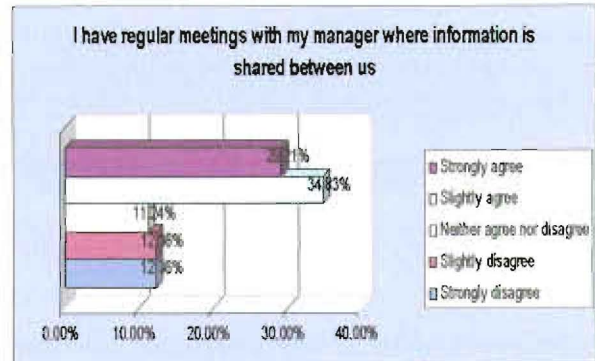
Construct 5: Implementation of new processes



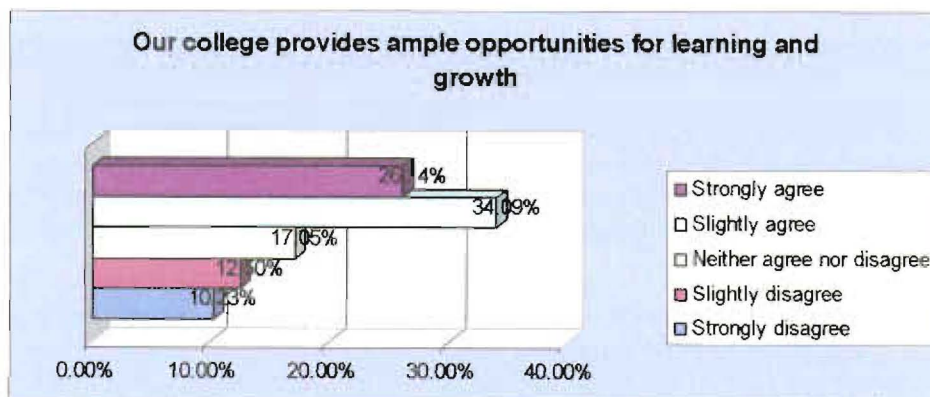
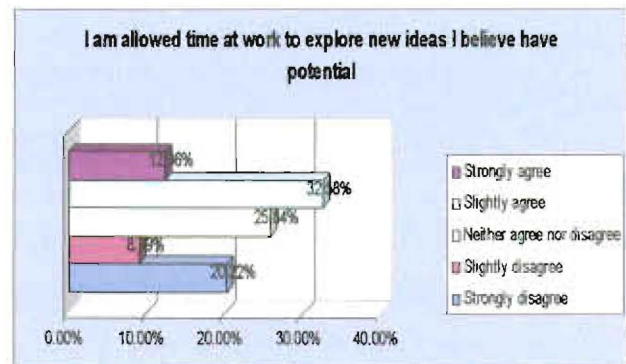
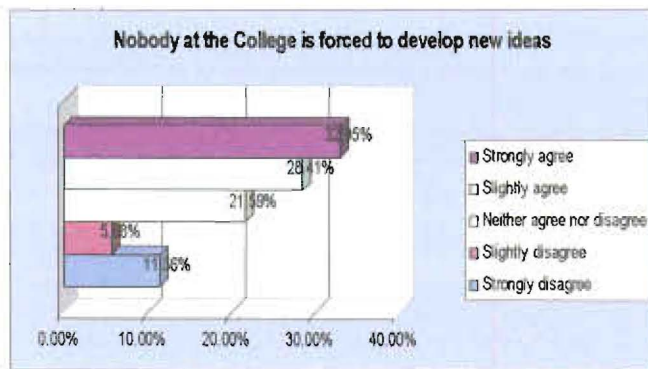
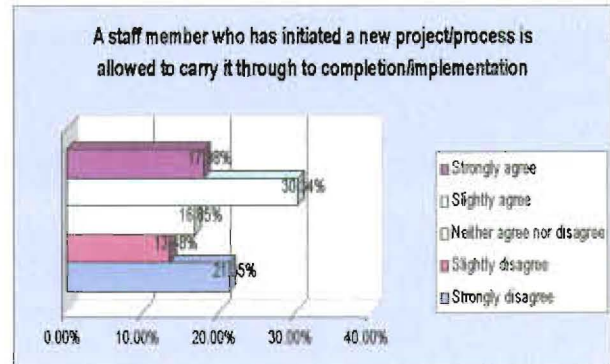
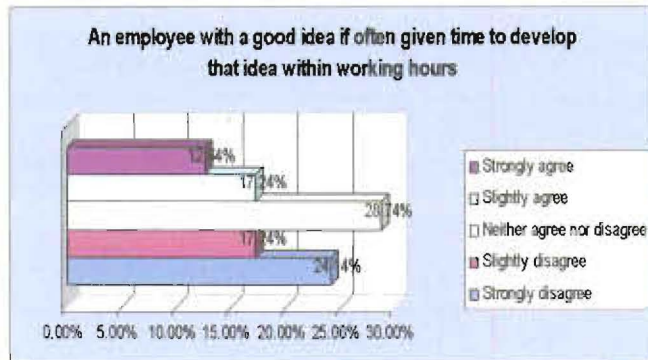
Construct 6: Rewarding system



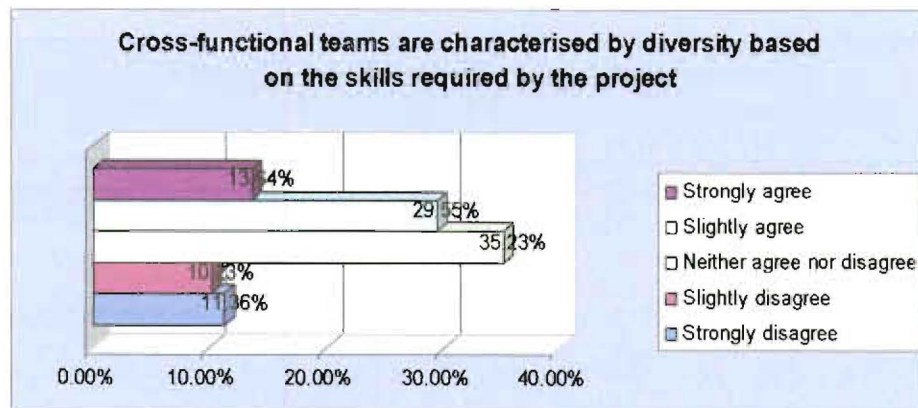
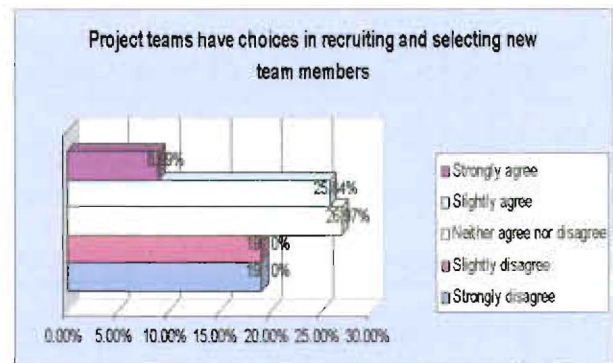
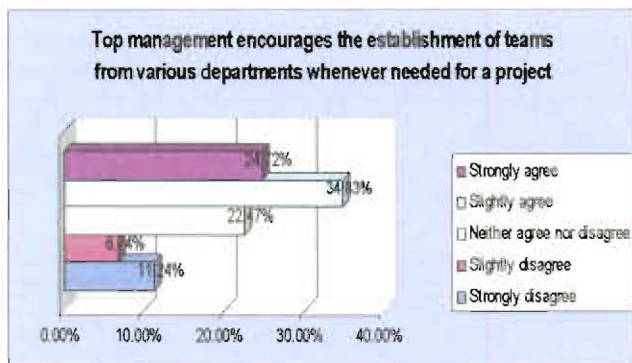
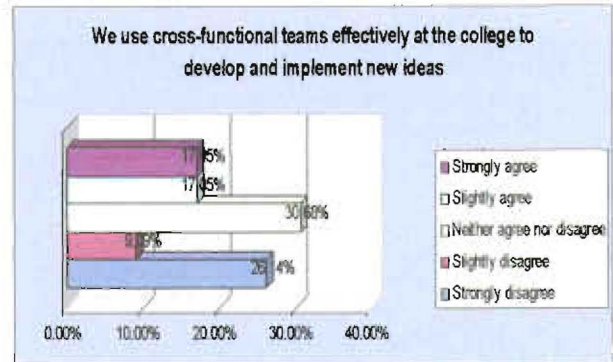
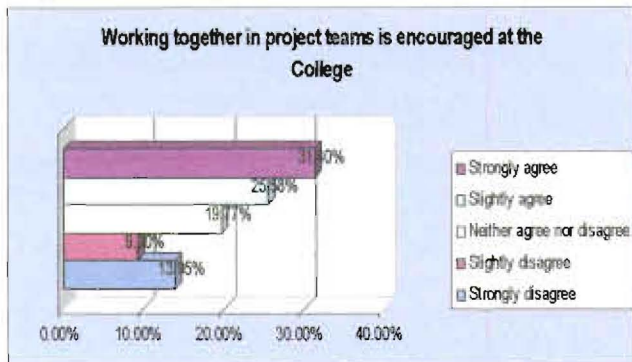
Construct 7: Communication and strategy buy-in



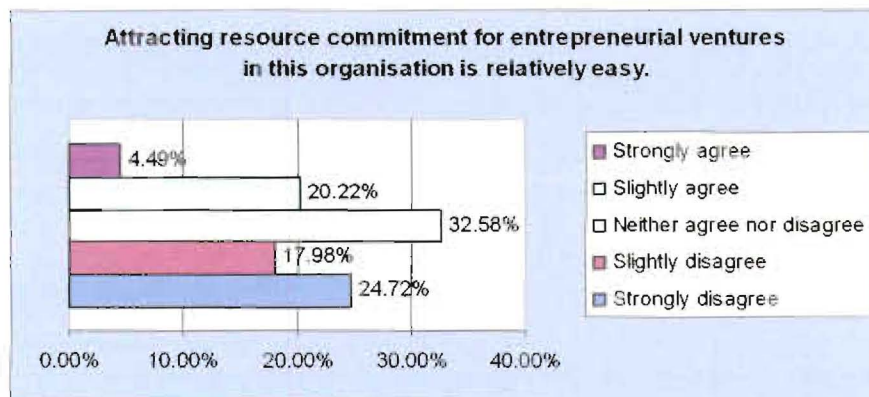
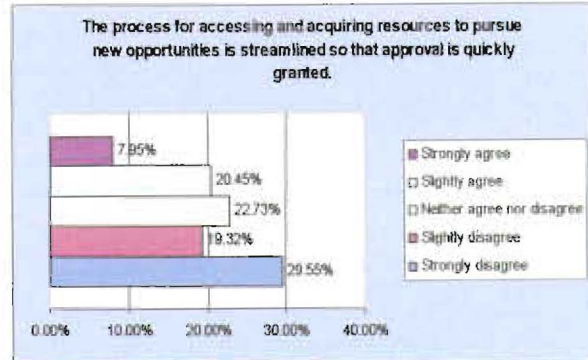
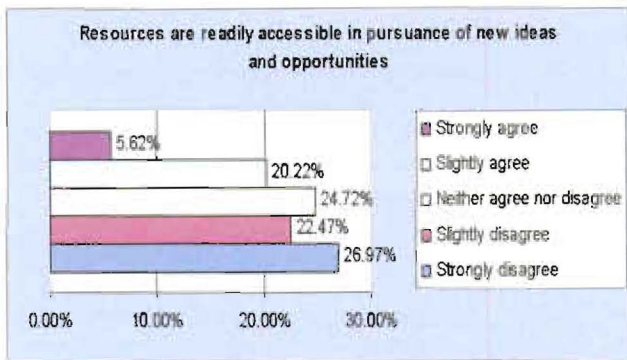
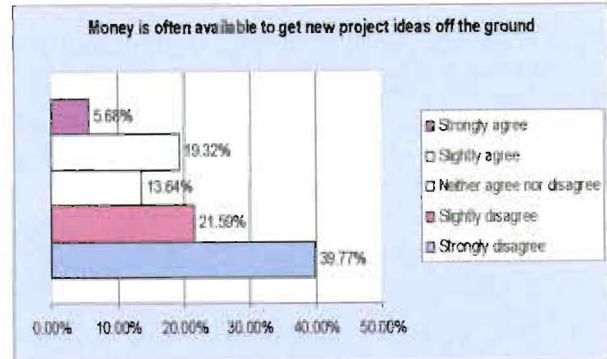
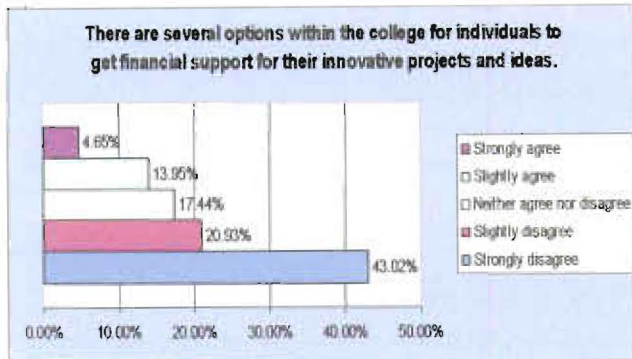
Construct 8: Discretionary time and volunteer programmes



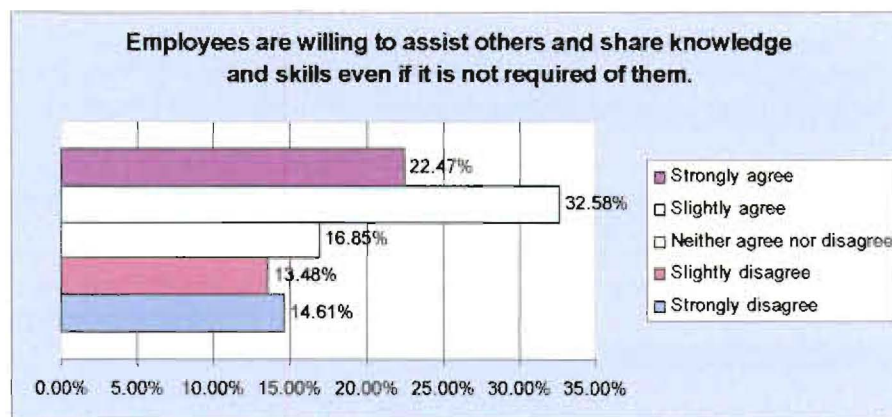
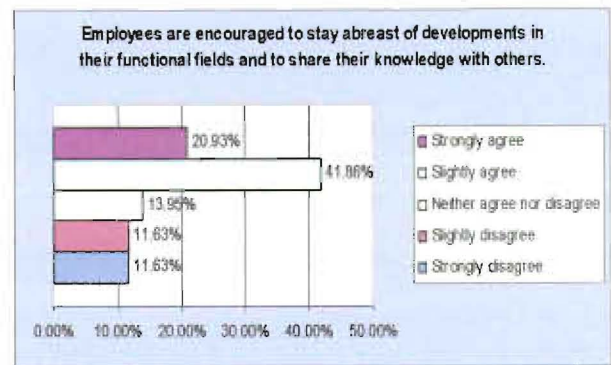
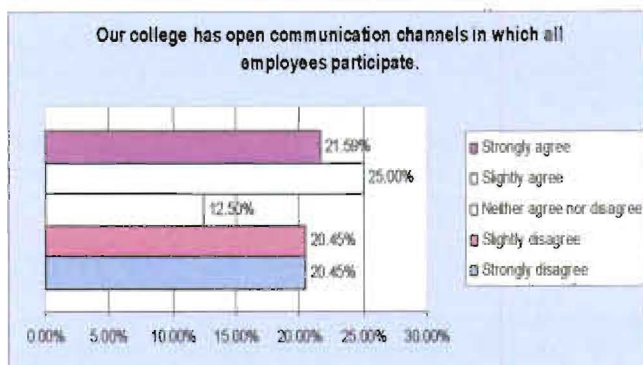
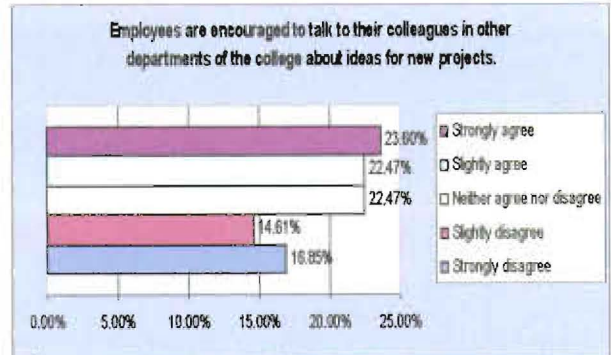
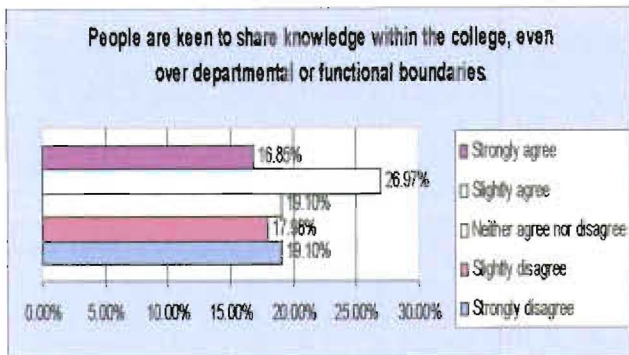
Construct 9: Teamwork



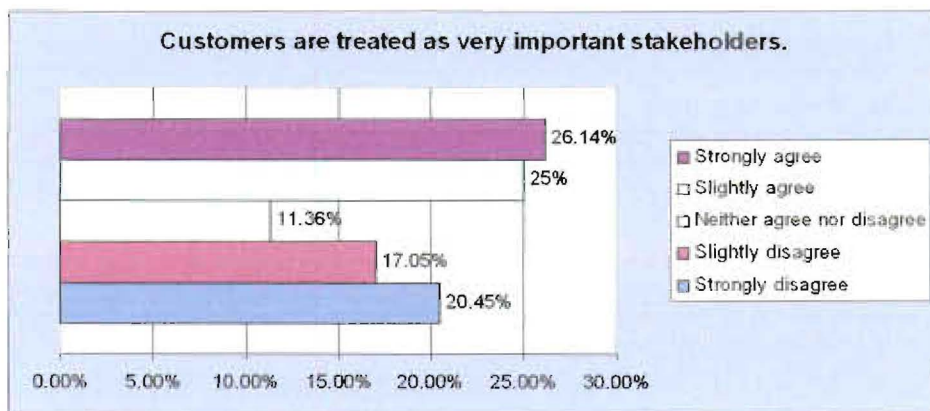
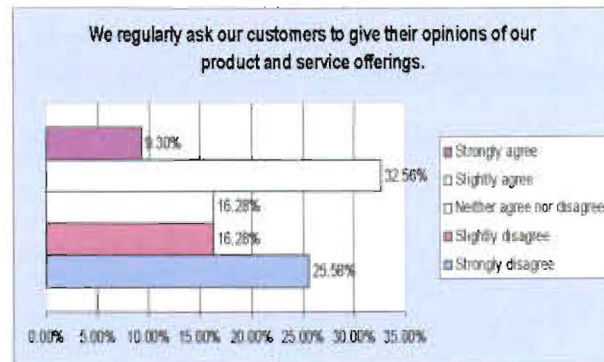
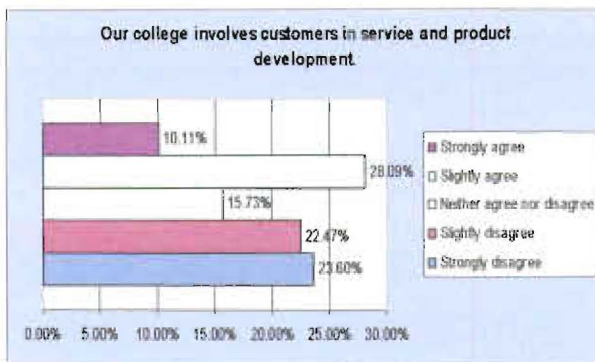
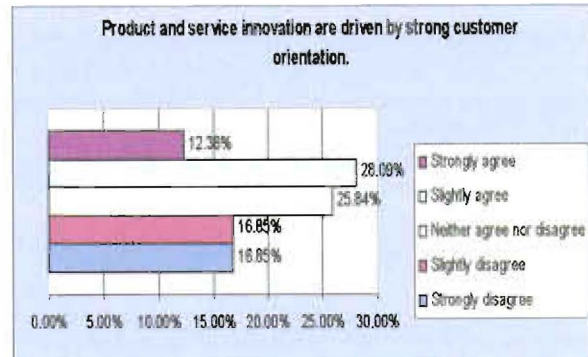
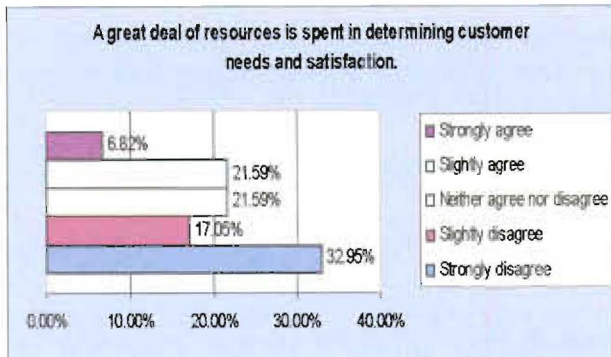
Construct 10: Availability of resources



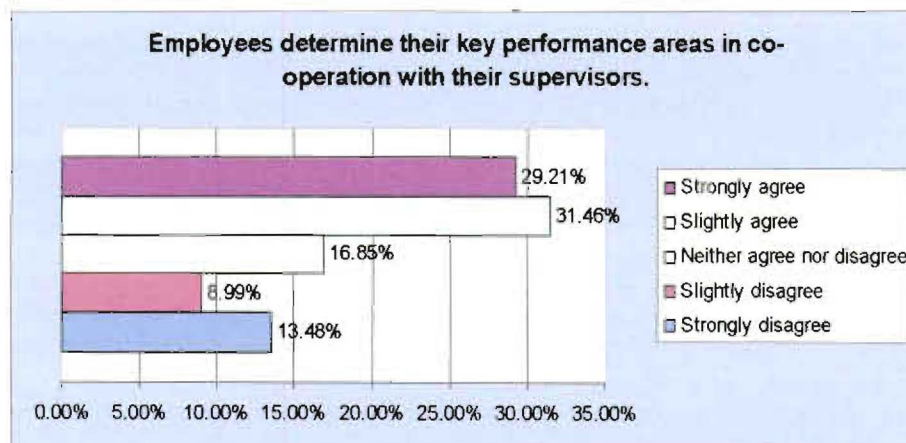
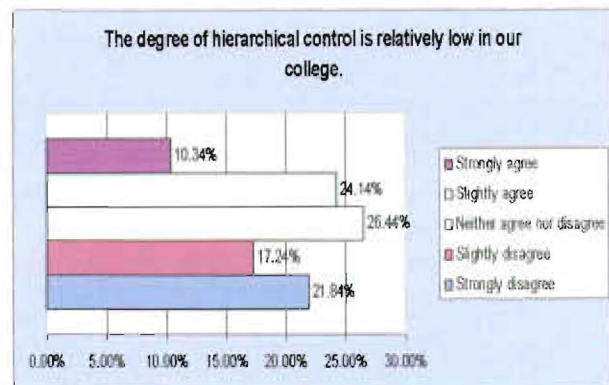
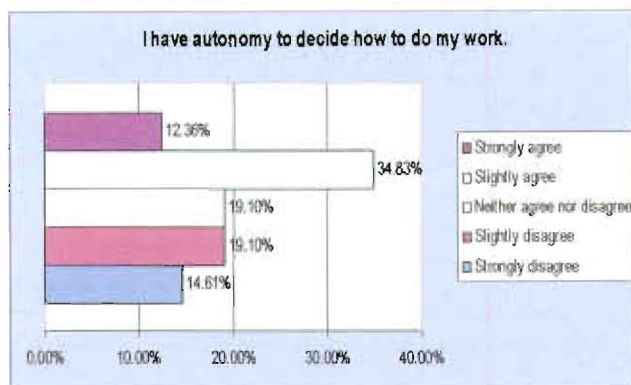
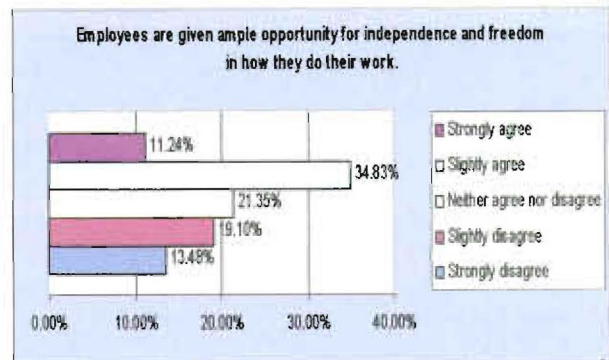
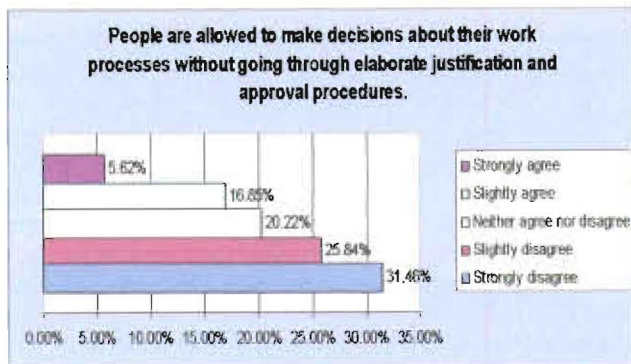
Construct 11: Continuous cross-functional learning



Construct 12: Strong customer orientation



Construct 13: Autonomy



ANNEXURE D

CRONBACH ALPHA COEFFICIENTS

No	Entrepreneurial construct and its items	Cronbach alpha coefficient
1	Visionary leadership and a long term view	0.903
1.1	Our leaders take a long term view of our college.	0.886
1.2	Our leaders challenge the status quo and they inspire us to think and act in innovative ways.	0.878
1.3	This organization has a specific value system which we all know and live up to.	0.899
1.4	Our leaders lead by example and people are eager to voluntarily follow them.	0.875
1.5	Our leaders seek to maximize value from opportunities.	0.869
2	Encouragement of innovation and creativity	0.876
2.1	Management encourages us to develop ideas that would improve the college.	0.850
2.2	Top management is receptive to my ideas and suggestions.	0.834
2.3	Those employees who come up with innovative ideas on their own receive management's encouragement for their activities.	0.847
2.4	The creation of innovative ideas is a regular occurrence in our college.	0.837
2.5	Senior managers allow innovators to bend rules and rigid procedures in order to keep promising ideas on track.	0.877
3	Support by management and champions	0.813
3.1	My manager helps me to get my work done by removing obstacles in my way.	0.814
3.2	Originators of new ideas find it easy to implement because of the support rendered by influential people at the college.	0.745
3.3	Our organization has people with influence that support, coach, protect, and find resources for an entrepreneurial project and its team.	0.761
3.4	Our college's managers have the skills, commitment and courage to be effective champions of entrepreneurial initiatives.	0.731
3.5	In this college it is easy to build coalitions of sponsors to help projects succeed.	0.820
4	Tolerance for risks and failure	0.818
4.1	Development at our college is based on taking calculated risks at the right time.	0.795
4.2	Projects involving calculated risk are highly valued, even when things do not always turn out according to plan.	0.742
4.3	We occasionally take big risks to keep ahead of our competitors.	0.781
4.4	This college supports many small and experimental projects realizing that some will undoubtedly fail.	0.788
4.5	If you make a mistake in this organization you will be forgiven.	0.801
5	Innovativeness and implementation of new processes	0.781
5.1	Our college quickly implements improved work methods that are developed by employees.	0.746
5.2	There is considerable number of employees at the College that are involved in generating and implementing innovative ideas.	0.747
5.3	This organization provides me with the chance to be creative and try out new methods of doing my job.	0.715
5.4	Training is provided to ensure that innovative new processes are implemented effectively.	0.733
5.5	Employees are inspired to push their boundaries and to think "out-of-the-box."	0.759
6	Rewarding system	0.847
6.1	Individuals implementing successful innovative projects receive additional rewards and compensation.	0.810
6.2	In this college recognition rather than criticism is emphasized.	0.826
6.3	My supervisor will give me special recognition if my work performance is outstanding.	0.846
6.4	In this college effective entrepreneurs are generally rewarded.	0.801
6.5	Employees are rewarded in relation to their job performance.	0.799
7	Vision, mission and strategic intent	0.832
7.1	I am well informed about our organizational vision and strategies.	0.807
7.2	I have regular meetings with my manager where information is shared between us.	0.824
7.3	Great effort has been made to clarify what the vision and strategy of the college mean to us in our own department.	0.764

7.4	The vision and strategies of the college often help me in setting priorities in my work.	0.773
7.5	There is considerable buy-in from employees into the value system of the College.	0.817
8	Discretionary time and learning opportunities	0.713
8.1	An employee with a good idea is often given time to develop that idea within working hours.	0.640
8.2	A staff member who has initiated a new project/process is allowed to carry it through to completion/implementation.	0.604
8.3	Nobody at the College is forced to develop new ideas.	0.818
8.4	I am allowed time at work to explore new ideas I believe have potential.	0.587
8.5	Our college provides ample opportunities for learning and growth.	0.611
9	Teamwork	0.887
9.1	Working together in project teams is encouraged at the college.	0.872
9.2	We use cross-functional teams effectively at the college to develop and implement new ideas.	0.848
9.3	Top management encourages the establishment of teams from various departments whenever needed for a project.	0.857
9.4	Project teams have choices in recruiting and selecting new team members.	0.869
9.5	Cross-functional teams are characterized by diversity based on the skills required by the project.	0.867
10	Resource availability	0.845
10.1	There are several options within the college for individuals to get financial support for their innovative projects and ideas.	0.840
10.2	Money is often available to get new project ideas off the ground.	0.786
10.3	Resources are readily accessible in pursuance of new ideas and opportunities.	0.821
10.4	The process for accessing and acquiring resources to pursue new opportunities is streamlined so that approval is quickly granted.	0.795
10.5	Attracting resource commitment for entrepreneurial ventures in this organization is relatively easy.	0.823
11	Continuous cross-functional learning	0.847
11.1	People are keen to share knowledge within the College, even over departmental or functional boundaries.	0.829
11.2	Employees are encouraged to talk to their colleagues in other departments of the college about ideas for new projects.	0.805
11.3	Our college has open communication channels in which all employees participate.	0.821
11.4	Employees are encouraged to stay abreast of developments in their functional fields and to share their knowledge with others.	0.803
11.5	Employees are willing to assist others and share knowledge and skills even if it is not required of them.	0.822
12	Strong customer orientation	0.875
12.1	A great deal of resources is spent in determining customer needs and satisfaction.	0.876
12.2	Product and service innovation are driven by a strong customer orientation.	0.843
12.3	Our college involves customers in service and product development.	0.834
12.4	We regularly ask our customers to give their opinions of our service and product offerings.	0.856
12.5	Customers are treated as very important stakeholders.	0.834
13	Autonomy	0.693
13.1	People are allowed to make decisions about their work processes without going through elaborate justification and approval procedures.	0.647
13.2	Employees are given ample opportunity for independence and freedom in how they do their work.	0.553
13.3	I have autonomy to decide how to do my work.	0.588
13.4	The degree of hierarchical control is relatively low in our college.	0.721
13.5	Employees determine their key performance areas in co-operation with their supervisors.	0.683

ANNEXURE E:

MEANS ANALYSIS OF INTRAPRENEURSHIP CONSTRUCTS

	CONSTRUCTS AND ITEMS	n	$\bar{x}$	s
1	Communication and strategy buy-in	84	3.328	1.357
1.1	I am well informed about our organisational vision and strategies.	84	3.547	1.459
1.2	I have regular meetings with my manager where information is shared between us.	84	3.595	1.345
1.3	Great effort has been made to clarify what the vision and strategy of the college mean to us in our own department.	84	3.500	1.401
1.4	The vision and strategies of the college often help me in setting priorities in my work.	84	3.285	1.331
1.5	There is considerable buy-in from employees into the value system of the College.	84	2.714	1.247
2	Inspirational leadership and a long term view	86	3.255	1.416
2.1	Our leaders take a long-term view of our college.	86	3.627	1.380
2.2	Our leaders challenge the status quo and they inspire us to think and act in innovative ways.	86	3.186	1.443
2.3	This organisation has a specific value system which we all know and live up to.	86	3.220	1.417
2.4	Our leaders lead by example and people are eager to voluntarily follow them.	86	2.988	1.426
2.5	Our leaders seek to maximise value from opportunities.	86	3.127	1.263
3	Continuous cross-functional learning	85	3.230	1.392
3.1	People are keen to share knowledge within the College, even over departmental or functional boundaries.	85	3.047	1.387
3.2	Employees are encouraged to talk to their colleagues in other departments of the college about ideas for new projects.	85	3.200	1.387
3.3	Our college has open communication channels in which all employees participate.	85	3.070	1.470
3.4	Employees are encouraged to stay abreast of developments in their functional fields and to share their knowledge with others.	85	3.494	1.278
3.5	Employees are willing to assist others and share knowledge and skills even if it is not required of them.	85	3.341	1.367
4	Discretionary time and volunteer programmes	85	3.213	1.328
4.1	An employee with a good idea is often given time to develop that idea within working hours.	85	2.776	1.330
4.2	A staff member who has initiated a new project/process is allowed to carry it through to completion/implementation.	85	3.094	1.419
4.3	Nobody at the College is forced to develop new ideas.	85	3.670	1.285
4.4	I am allowed time at work to explore new ideas I believe have potential.	85	3.035	1.322
4.5	Our college provides ample opportunities for learning and growth.	85	3.494	1.287
5	Teamwork	84	3.199	1.297
5.1	Working together in project teams is encouraged at the college.	84	3.488	1.392
5.2	We use cross-functional teams effectively at the college to develop and implement new ideas.	84	2.880	1.409
5.3	Top management encourages the establishment of teams from various departments whenever needed for a project.	84	3.535	1.265
5.4	Project teams have choices in recruiting and selecting new team members.	84	2.869	1.277
5.5	Cross-functional teams are characterised by diversity based on the skills required by the project.	84	3.226	1.144
6	Implementation of new processes	86	3.060	1.315
6.1	Our college quickly implements improved work methods that are developed	86	3.000	1.337

	by employees.			
6.2	There is considerable number of employees at the College that are involved in generating and implementing innovative ideas.	86	2.523	1.299
6.3	This organisation provides me with the chance to be creative and try out new methods of doing my job.	86	3.209	1.338
6.4	Training is provided to ensure that innovative new processes are implemented effectively.	86	3.488	1.262
6.5	Employees are inspired to push their boundaries and to think "out-of-the-box."	86	3.081	1.339
7	Encouragement of new ideas and innovativeness	84	3.035	1.353
7.1	Management encourages us to develop ideas that would improve the college.	84	3.654	1.392
7.2	Top management is receptive to my ideas and suggestions.	84	3.154	1.409
7.3	Those employees who come up with innovative ideas on their own receive management's encouragement for their activities.	84	3.083	1.355
7.4	The creation of innovative ideas is a regular occurrence in our college.	84	2.726	1.347
7.5	Senior managers allow innovators to bend rules and rigid procedures in order to keep promising ideas on track.	84	2.559	1.264
8	Autonomy	87	3.001	1.288
8.1	People are allowed to make decisions about their work processes without going through elaborate justification and approval procedures.	87	2.390	1.260
8.2	Employees are given ample opportunity for independence and freedom in how they do their work.	87	3.114	1.252
8.3	I have autonomy to decide how to do my work.	87	3.103	1.285
8.4	Our leaders seek to maximise value from opportunities.	87	2.839	1.301
8.5	Employees determine their key performance areas in co-operation with their supervisors.	87	3.563	1.344
9	Support by management and champions	87	2.969	1.339
9.1	My manager helps me to get my work done by removing obstacles in my way.	87	3.356	1.311
9.2	Originators of new ideas find it easy to implement because of the support rendered by influential people at the college.	87	2.839	1.396
9.3	Our organisation has people with influence that support, coach, protect, and find resources for an intrapreneurial project and its team.	87	2.919	1.259
9.4	Our college's managers have the skills, commitment and courage to be effective champions of intrapreneurial initiatives.	87	3.241	1.446
9.5	In this college it is easy to build coalitions of sponsors to help projects succeed.	87	2.494	1.283
10	Tolerance for risks and failure	89	2.959	1.257
10.1	Development at our college is based on taking calculated risks at the right time.	89	3.089	1.239
10.2	Projects involving calculated risk are highly valued, even when things do not always turn out according to plan.	89	2.797	1.341
10.3	We occasionally take big risks to keep ahead of our competitors.	89	2.741	1.335
10.4	This college supports many small and experimental projects realising that some will undoubtedly fail.	89	2.707	1.235
10.5	If you make a mistake in this organisation you will be forgiven.	89	3.460	1.138
11	Strong customer orientation	85	2.880	1.119
11.1	A great deal of resources is spent in determining customer needs and satisfaction.	85	2.552	1.331
11.2	Product and service innovation are driven by a strong customer orientation.	85	2.976	1.262
11.3	Our college involves customers in service and product development.	85	2.729	1.330
11.4	The degree of hierarchical control is relatively low in our college.	85	2.823	1.373
11.5	Customers are treated as very important stakeholders.	85	3.200	1.502
12	Rewarding system	79	2.552	1.324
12.1	Individuals implementing successful innovative projects receive additional rewards and compensation.	79	2.132	1.278
12.2	In this college recognition rather than criticism is emphasised.	79	2.860	1.393
12.3	My supervisor will give me special recognition if my work performance is	79	3.329	1.499

	outstanding.			
12.4	In this college effective intrapreneurs are generally rewarded.	79	2.215	1.183
12.5	Employees are rewarded in relation to their job performance.	79	2.227	1.270
13	Resource availability	84	2.432	1.227
13.1	There are several options within the college for individuals to get financial support for their innovative projects and ideas.	84	2.154	1.265
13.2	Money is often available to get new project ideas off the ground.	84	2.309	1.344
13.3	Resources are readily accessible in pursuance of new ideas and opportunities.	84	2.547	1.255
13.4	The process for accessing and acquiring resources to pursue new opportunities is streamlined so that approval is quickly granted.	84	2.583	1.328
13.5	Attracting resource commitment for entrepreneurial ventures in this organisation is relatively easy.	84	2.571	1.195