

An assessment of the impact of entrepreneurial orientation on the success of selected public secondary schools

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ABSTRACT

Entrepreneurship has been hailed as the new engine of economic growth in both developed and developing countries. It is paradigmatically referred to as the process of innovatively exploring and exploiting opportunities in the midst of risks and uncertainty, by synthesising resources to create novel outputs, often within the context of new organisational formation. Exalted as the driving force of innovation, entrepreneurship offers the benefits of increased economic efficiencies, alleviation of poverty, bringing, innovation to the market, job creation, and sustained employment.

Traditionally, entrepreneurship was associated with the private sector and for-profit businesses, with entrepreneurial innovations considered to be those directed toward the marketplace. Therefore, the phenomenon initially received marginal attention in public school management. Schools are state-appointed suppliers of a service, funded by the government, and are considered as domesticated organisations, therefore their survival is seldom at doubt. On the other hand, schools are operating in an environment of increasing uncertainty. This uncertainty stems from their openness and consequent exposure to rapid environmental changes. It was found that public schools face various challenges, including a lack of entrepreneurial spirit and a fragmented approach regarding their visions, missions and strategic thrust.

This study, through literature research and a quantitative empirical research, focused on the identification of the dimensions of entrepreneurial orientation (independent variables) and the factors related to *perceived school success* (dependent variables). Furthermore, the study exploits the relationship between the dependent variables and the independent variables to determine the impact of entrepreneurial orientation on *perceived school success* in three predetermined groups of secondary schools in Gauteng.

Factors measuring entrepreneurial orientation were extracted from the literature review, and identified as ***autonomy, innovativeness, risk-taking, competitive***

aggressiveness and **pro-activeness**. Factors measuring *perceived school success* were identified in order to develop a measure of school success. The 13 identified dependent variables were classified into four different groups. After grouping, the four main categories were **school leadership** (*leadership, evaluating school performance and staff development*), **teaching and learning** (*emphasis on academics, class size and high quality of teaching and learning*), **learner behaviour** (*safe and orderly schools, discipline and parental involvement*) and **learners** (*learner self-esteem, monitoring pupil performance, feedback and high expectations*).

The study was based on a sample of 800 educators, heads of departments, deputy principals and principals at selected public secondary schools in the province of Gauteng in South Africa, who completed a structured questionnaire. The majority of the respondents were between the ages of 50 and 59 and 74% of the respondents were female. The primary unit of measurement was public secondary schools, and as expected, respondents were mostly educated, with 97.6% in possession of post-matric qualifications. Only 74.1% had a degree or higher qualification though. A total of 79.3% of the respondents were educators on post level 1 and regarding the population group, 83.5% were White.

The effect of each of the independent variables on each of the measures of *perceived school success*, as the dependent variable, was measured through 13 multiple regression coefficients, after the independent variable was proven reliable and valid through drawing a pattern matrix of Oblimin rotated-principal component factor analysis, Kaiser-Meyer-Olkin measures of sampling adequacy, and Bartlett's test of sphericity. The measurement instrument utilised in this study was proven to be reliable and valid. None of the factors loaded significantly onto the independent variable, *risk-taking*.

A Hierarchical Linear Modeling was performed to determine whether there were significant differences between the school groups in terms of selected variables. A Spearman rho was also performed to determine the correlation between the independent variables and the four main groups of dependent variables.

During the empirical research, it was found that significant relationships exist between **leadership**, *autonomy*, *innovativeness*, and *competitive aggressiveness*; **evaluating school performance**, *autonomy*, and *innovativeness*; **staff development**, *autonomy*, *innovativeness*, and *competitive aggressiveness*; **emphasis on academics**, *autonomy*, *innovativeness*, and *competitive aggressiveness*; **class size**, *pro-activeness* and *competitive aggressiveness*; **quality of teaching and learning**, *autonomy* and *innovativeness*; **safe schools**, *autonomy*, *innovativeness* and *competitive aggressiveness*; **discipline**, *autonomy*, *innovativeness* and *pro-activeness*; **parental involvement**, *pro-activeness* and *competitive aggressiveness*; **learner self-esteem**, *innovativeness* and *pro-activeness*; **monitoring pupil performance**, *autonomy* and *innovativeness*; **feedback**, *autonomy*, *innovativeness*; and **high expectations**, *autonomy* and *innovativeness*.

In relation to the Hierarchical Linear Modeling of the independent variables, differences between the three groups of schools were found in terms of **innovativeness** (practical visible and practical significant differences), **pro-activeness** (practical visible difference), and **competitive aggressiveness** (practical visible difference). The results of the dependent variables indicate practical significant differences in terms of **emphasis on academics** and **parental involvement**.

The results of the Spearman rho indicated that the four groups of dependent variables were reliable after determining the Cronbach alpha coefficients. Practical significant correlations were found between **innovativeness**, *school leadership*, *teaching and learning* and *learner behaviour*; **competitive aggressiveness**, *school leadership*, *teaching and learning* and *learner behaviour*. Practical visible correlations were found between **autonomy**, *school leadership*, *teaching and learning*, *learner behaviour* and *learners*; **Innovativeness** and *learners*; *pro-activeness*, *school leadership*, *teaching and learning* and *learner behaviour*; and **competitive aggressiveness** and *learners*.

Both primary and secondary objectives were met and all research questions were answered. All criteria were met to ensure that the research was conducted according to

research principles. Through this research, school principals and school management teams in South Africa can gain insight into the creation of entrepreneurial success as well as the measurements of *perceived school success*, in order to create sustainability and a competitive advantage.

It is recommended that future research should include non-functional or poor performing schools.

Key words: Entrepreneurial orientation, intrapreneur, secondary schools, success, principal, school management, and entrepreneurial leadership.

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CHAPTER 1

NATURE AND SCOPE OF STUDY

1.1 INTRODUCTION

In the years following the political transition in South Africa, the most important item on the national agenda was the social, economic and political integration of all South African people, particularly those marginalised under apartheid. After decades of systematic segregation and legislated racial exclusivity, the post-apartheid government faces the mammoth task of expanding service delivery, reducing widespread unemployment, and facilitating economic growth. As a means to an end, and to promote social cohesion, education was prioritised as an area for expansion and reform (Spaull, 2012:1).

According to Modisaotsile (2012:1), an educated population remains the fundamental platform for meeting most of the Millennium Developmental Goals (MDGs), and a well-oiled education system is important for many reasons. It is a means to encourage a knowledge movement which reflects the traditional heritage of South Africa and develops it into a living force for the future. A good education system is crucial, not only for ensuring that the citizenry is well educated; but also for human development and for the maintenance of socially responsive economic and political systems.

In South Africa there are many signs that illuminate the crisis in education. With high enrolment rates each year, and an increasingly poor Grade 12 output, it is clear that the focus needs to be on the quality of education. Quantity should, however, also be considered when the majority of those learners who pass Grade 12 do not meet the minimum requirements for university entrance (Modisaotsile, 2012:2).

Amongst other concerns, a lack of good and effective leadership in schools is a big problem. It is against this background that Malan (2011:66) proposes a new type of

leadership, an entrepreneurial leadership that must be evident in schools. School principals must take advantage of the opportunities within their school communities to mobilise resources, promote new initiatives and lead change in their schools and communities. In practice, this means leadership with an innovative and revolutionary mentality – an entrepreneurial orientation. Malan (2011:103) determined that performance over the long-term is dependent on schools innovating and adopting leadership roles in their teacher communities.

Yemini, Addi-Racah and Katarivas (2015:528) find that traditionally, entrepreneurship is associated with the private sector and for-profit businesses, with entrepreneurial innovations considered to be those directed toward the marketplace. Therefore, the phenomenon initially received marginal attention in public educational settings (Borasi & Finnigan, 2010:2). Furthermore, schools are frequently considered to be resistant to educational change; expressed in their reliance on institutional regulations and norms, which leave little room for entrepreneurship (Levin, 2006:3). Eyal (2007:2) claims that school entrepreneurship falls under the term corporate entrepreneurship: a business' tendency to initiate and implement both incremental and radical innovations in its internal as well as external environments. The survival of public schools is generally assured, when schools stagnate they risk losing their relevance and legitimacy in the eyes of the society they serve (Drucker, 1985). Entrepreneurship, therefore, should be studied as a basic mechanism that increases a school's adaptive capacity and ability to maintain its relevance in conditions of uncertainty.

In this chapter the background to the study will be explained and the problem will be stated. The primary and secondary objectives of the study will be defined and explained. The researcher will also select the exploratory research technique to be used. This chapter furthermore describes the selection of the basic method of research - whether a quantitative or qualitative methodology will be employed to answer the research questions. This also includes the process surrounding the development of the research instrument. The selection of the sample design and the population will also be discussed.

The gathering of data and the ultimate data processing and analyses are the penultimate steps in the research process and are discussed in detail. The final step is to draw conclusions and preparing a report. A detailed discussion of the research and its findings can be found in Chapters 6 and 7 of this study. Chapter 1 will also provide a complete layout of the study.

1.2 PROBLEM STATEMENT

Blumberg, Cooper and Schindler (2011:55-56) find that any research starts with a clearly defined research problem statement. These authors note that the researcher needs to confirm whether some theoretical considerations are available to address the research problem and whether the problem makes a valuable contribution to the field of study. The problem statement of the study should conform to all the criteria of a good research problem, as suggested above by Blumberg *et al.* (2011:55-56): Firstly, the problem should be narrowly defined and remain focused; secondly, there should be numerous theories that address the research problem (as explained in Chapter 2); Finally, the research problem should be relevant and, if addressed properly, the outcome should hold various advantages for the relevant parties. A brief synopsis of the background leading to the problem statement, and evidence that the problem statement meets the criteria of a good research problem, is outlined below.

In South Africa today, almost everyone has an opinion about education and schooling. Some people think there have been vast improvements since 1994, while others believe that much of the system is worse off than the Bantu education of Apartheid (Spaull, 2012:1). According to the Organisation for Economic Co-operation and Development (OECD) (cited by SASIX, 2011), many local learners fare much worse in international tests than their peers in other developing countries, including African countries. Globally, South Africa's education system is rated lower than that of Botswana, Kenya, Mauritius, the Seychelles and Brazil. The levels of illiteracy in South Africa are high; an estimated 24% of persons above the age of 15 cannot read, since the educators in the township schools are poorly educated themselves.

The information above is supported by the results of the Annual National Assessment of 2014 (Department of Basic Education, 2014). The Annual National Assessment is a critical measure for monitoring progress in learner achievement as outlined in the Educational Sector Plan, *Action Plan to 2014: Towards the realisation of Schooling 2025* (Department of Basic Education, 2014:40-43). Although there are positive signs of improvement, the results are still a reflection on the state of education in South Africa. The national averages for mathematics are 56% for Grade 3 (a 3% improvement from 2013), 43% for Grade 6 (a 4% improvement from 2013) and 11% for Grade 9 (a 3% decline). Only 65% of Grade 3 learners, 35% of Grade 6 learners and 3% of Grade 9 learners, could achieve at least 50% for mathematics. The national averages for Home Language are 56% for Grade 3 (an increase of 5 %), 63% for Grade 6 (a 4% improvement) and 48% for Grade 9 (a 5% improvement) (Department of Basic Education, 2014:40-43).

Does the education system then serve its purpose? The unemployment rate in South Africa is very high; 26.7% for the first quarter of 2016 (Statssa, 2016). The enduring problems with school quality in the bulk of the education system, constrain the ability of education to provide a pathway out of poverty for poor children. Such children frequently attend schools with a lack of discipline, weak management and similarly weak teaching. This relationship between poverty and low-quality tuition is reinforced through several social mechanisms, including the influence of parents and peers.

Van den Berg (2011:1) finds that school management and accountability are issues that keep reappearing as prominent hindrances to school performance. Without a principal who manages school resources efficiently, ensures that teachers arrive at school on time, cover the curriculum and assess at an appropriate level, any policy intervention will achieve limited success. Teachers need to be accountable to principals and principals to parents and the Education Department. There should be enforcement of standards through appropriate sanctions, where required. Accountability devoid of consequences is not accountability. Whereas measures to enforce accountability may

have been taken to extremes in some developed countries, in South Africa we have a predisposition towards doing the opposite.

According to the Department of Basic Education (2015:1-6), in 2013 there were 391 829 teachers, with 11 975 844 learners in 24 136 public schools. Bloch (2009:82) explains that principals and the education authorities are often unable to assume the burden of the administrative and academic support required from them. Where would 24 136 managers come from, all capable of running schools well, with due regard for all the different levels of operations and skills required?

Mahmood and Hanafi (2013:83) explain that Entrepreneurial Orientation (EO) is a significant contributor to a business' success. The positive relationship between entrepreneurial orientation and performance has been noted by a number of researchers (Covin & Slevin, 1991:19; Lumpkin & Dess, 1996:135; Kraus, Hughes & Hosman, 2011:161). In practice, this suggests that businesses that adopt a greater entrepreneurial orientation will also perform better. Within the South African context, limited research has been performed on this matter – especially within the education sector (Malan, 2011:3). The dysfunctionality of schools can, among others, be ascribed to school management teams that do not have an entrepreneurial orientation or posture, thus they are not able to facilitate change in order to secure the sustainability of the school (Malan, 2011:52). A new type of leadership is required – entrepreneurial leadership with an innovative and revolutionary mentality. Concerns about education quality are also inextricably linked to broader accountability issues in terms of education management (Reddy, Prinsloo, Netshitangani, Moletsane, Juan & Janse van Rensburg, 2010:1).

Performance over the long-term is dependent on the school innovating and adopting a leadership role in the teacher community. According to Mahmood and Hanafi (2013:83), entrepreneurial orientation is also a resource and capability that present a lasting competitive advantage and superior performance to the school.

The literature affirms that the business' competitive advantage and performance are largely influenced by the entrepreneurial behaviour thereof (Wiklund & Shepherd, 2003:1313; Zahra & Covin, 1995:44). Thornberry (2003:330) explains that corporate entrepreneurship is quickly becoming a weapon of choice for many large businesses.

Thornberry (2003:330) explains that corporate entrepreneurship is an attempt to take both the mind-set and skills-set demonstrated by successful start-up entrepreneurs and inculcate these characteristics into the cultures and activities of a large company. Corporate entrepreneurship can be a powerful antidote to large company staleness, lack of innovation, stagnated top-line growth, and the inertia that often overtakes the large, mature companies of the world. At the same time, teaching managers to behave like start-up entrepreneurs is a tall order, but a number of large companies have already embarked on this path.

Pihie, Asimiran and Bagheri (2014:1-2) describe entrepreneurial leadership as a distinctive type of leadership required for dealing with challenges and crises of the current business settings (Gupta, MacMillan & Surie, 2004:1). This leadership style enables leaders to successfully direct their organisation and solve problems through different steps of the organisation's growth and development (Chen, 2007:242; Swiercz & Lydon, 2002:382). It also has great influence on leaders' competence in recognising new opportunities to improve the organisation's performance (Chen, 2007:240; Gupta *et al.*, 2004:20). These influential effects have led scholars to increasingly apply entrepreneurial leadership to improve various aspects of education; specifically school performance (Xaba & Malindi, 2010:77; Eyal & Kark, 2004:212; Eyal & Inbar, 2003:222).

Entrepreneurial leadership has been emphasised to create a supportive environment for change and innovation at schools (Park, 2012:89). According to Hamzah, Yusof and Abdullah (2009:536), school principals need to acquire and practice entrepreneurial leadership characteristics in order to improve their schools' effectiveness and to facilitate the process of school innovation.

Eyal and Inbar (2003:221-222) argue that public schools are state-appointed suppliers of a service funded by the government, and are considered to be domesticated businesses, therefore, their survival is seldom in doubt. On the other hand, schools operate in an environment of increasing uncertainty. Xaba and Malindi (2010:76) find that school leaders need to apply entrepreneurial competencies to transform this uncertainty into opportunities which can lead to sustainability and a competitive advantage.

Phelan, Johnson and Semrau (2013:6) explain that a school with a strong entrepreneurial orientation has elected to adopt a strategic posture that provides a set of dispositions and behavioural repertoires that favour novel adaptations to environmental changes. Preston, Goldring, Brerends and Canata (2012:4) confirm that the need for new initiatives, flexibility and self-renewal, are basic prerequisites in preventing the creation of gaps between the societal-environmental demands and the function of the school. Xaba and Malindi (2010:76) explain that there are different complexities and challenges for schools, namely higher demands for improving the quality of education in public schools, fast changes in the environment, and growing shortages in school resources and funds (Eyal & Kark, 2004:212; Eyal & Inbar, 2003:202). Scholars therefore believe that school principals require entrepreneurial leadership characteristics and the required knowledge and competence to execute their tasks, based on leadership principles.

There is limited research available on the relationship between school principals' entrepreneurial leadership practices and school performance or success. Against this background, the primary objective of this study is to determine the influence of entrepreneurial orientation on the success of the participating secondary schools.

1.3 PURPOSE OF THE STUDY

The purpose of this study is to fill the gap in the current literature on the effects of entrepreneurial orientation, specifically in South African secondary schools. Given the

importance of education and the current state of the South African system, research on the topic of integrating entrepreneurial competencies into the management functions of schools, as a possible remedy for poor performance, is critical. A small percentage of South African schools can be considered as successful. According to Scheerens (2013:4), in the most general sense, 'school effectiveness' refers to the level of goal attainment of a school. Although average achievement scores in core subjects, established at the end of a fixed program are the most probable 'school effects', alternative criteria like the responsiveness of the school to the community and the satisfaction of the teachers may also be considered. Botha (2010:606) agrees that school effectiveness means that "the school accomplishes its objectives". The study attempts to identify whether the employment of an entrepreneurial orientation posture may be the answer to turn a school around from dysfunctional to successful.

To give effect to this purpose and to address the research gaps in the current literature, the researcher will develop and empirically test a hypothesised model of the dimensions of entrepreneurial orientation that will influence the *perceived success* of schools. To the best knowledge of the researcher, after thorough research, no similar study has been done; using a similar design and approach to shed light on the problem with respect to entrepreneurial orientation and schools' success.

1.4 RESEARCH OBJECTIVES

The research objectives are divided into primary and secondary objectives.

1.4.1 Primary objective

The primary objective of this study is to assess the level and impact of entrepreneurial orientation on the perceived success of three selected groups of public secondary schools in Gauteng.

1.4.2 Secondary objectives

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

- To obtain insight into entrepreneurship and entrepreneurial orientation by means of a literature study.
- To obtain insight into how public secondary schools operate as entrepreneurial entities.
- To obtain insight into school principals acting as entrepreneurs.
- To gain insight into the current state of education in South Africa.
- To gain insight into the perceived success factors for public schools by means of a literature study.
- To determine and analyse the relationship between entrepreneurial orientation and the success factors for public secondary schools.
- To determine whether there are significant differences between the school groups in terms of selected variables.
- To provide recommendations on how to enhance and foster an entrepreneurial climate and culture within public secondary schools.

1.4.3 Methodological objectives

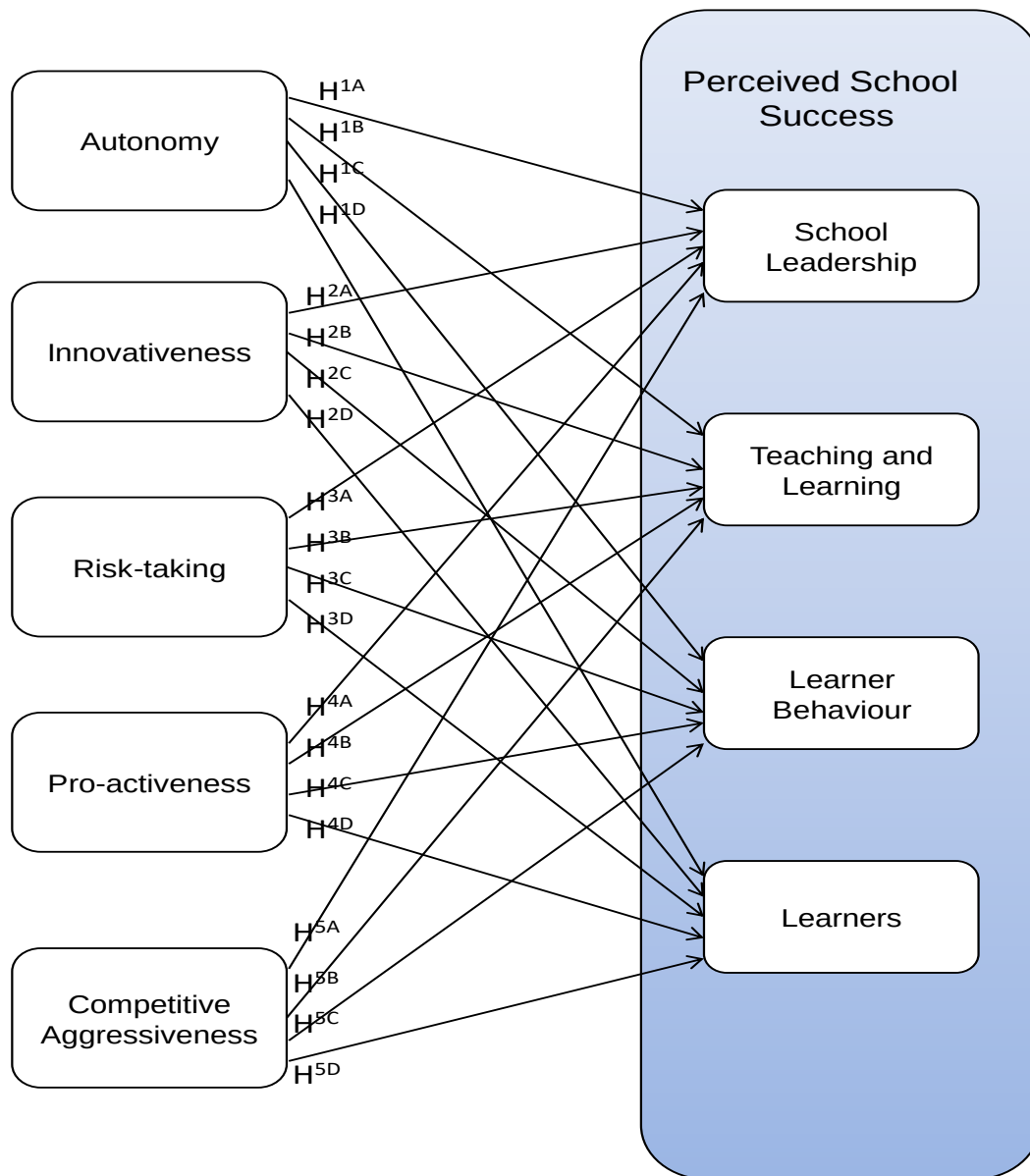
In order to address the above-mentioned primary and secondary objectives, the following methodological objectives have been identified:

- To undertake a theoretical investigation into the following:
 - The nature and importance of entrepreneurship and entrepreneurial orientation.
 - The state of education in South African public schools.
 - The possible success factors that successful schools share.
- To develop a hypothesised model of the constructs of entrepreneurial orientation that could influence the perceived success factors of a school, and to suggest appropriate hypotheses pertaining to the relationships depicted in the hypothesised model.
- To determine an appropriate research design that would be most suitable for this study to facilitate the attaining of the objectives.
- To develop a measuring instrument to empirically test the relationships, as described in the hypothesised model.
- To conduct an empirical investigation and empirically test the relationships proposed in the hypothesised model, on a sample of educators at selected secondary schools.
- To report research findings, interpret data and address potential relationships that emanate from the data analysis.
- To interpret the research findings and provide guidelines and recommendations to public schools in South Africa on how to incorporate entrepreneurial orientation as a new mind-set to improve performance and to secure a competitive advantage.

1.5 PROPOSED HYPOTHESISED FRAMEWORK

In Figure 1.1 (the hypothesised framework) on the next page, the dimensions of entrepreneurial orientation, hypothesised as influencing the dependent variable, Perceived success of the participating secondary schools (which consist of four main categories, *School Leadership*, *Teaching and Learning*, *Learner Behaviour* and *Learners*), are Autonomy, Innovativeness, Risk-taking, Pro-activeness and Competitive aggressiveness. The framework proposes that the dimensions of entrepreneurial orientation investigated in this study, are positively related to the perceived success of the participating public secondary schools.

Figure 1.1 Theoretical framework



Chapters 2, 3 and 4 provide the theoretical background on which the theoretical framework is based.

1.5.1 Research questions

A number of research questions have been formulated to guide and centre the study:

- What exactly is entrepreneurship and the constructs or dimensions of corporate entrepreneurship?
- Can the phenomenon of entrepreneurship be applicable to public entities?
- Is it possible for a school principal to be considered an entrepreneur?
- Why is education in South Africa in the current state?
- What factors make a school to be considered as successful?
- What is the relationship between entrepreneurial orientation and organisational success?
- What is the relationship between entrepreneurial orientation and the success factors of public secondary schools?
- What is the variance in the educational outcomes for different groups of schools, differing on the grounds of the availability of resources, the community that they serve, and the background of the learners?
- What can be done to enhance and foster an entrepreneurial climate and culture within public secondary schools?

1.5.2 Research hypothesis

A number of research hypotheses have been formulated to summarise the various relationships depicted in the proposed hypothesised framework (Figure 1.1):

H^{1A}: There is a positive relationship between the implementation of *Autonomy* in the school environment and *School Leadership* in the participating secondary schools.

H^{1B}: There is a positive relationship between the implementation of *Autonomy* in the school environment and *Teaching and Learning* in the participating secondary schools.

H^{1C}: There is a positive relationship between the implementation of *Autonomy* in the school environment and *Learner Behaviour* in the participating secondary schools.

H^{1D}: There is a positive relationship between the implementation of *Autonomy* in the school environment and *Learners* in the participating secondary schools.

H^{2A}: There is a positive relationship between the implementation of *Innovativeness* in the school environment and *School Leadership* in the participating secondary schools.

H^{2B}: There is a positive relationship between the implementation of *Innovativeness* in the school environment and *Teaching and Learning* in the participating secondary schools.

H^{2C}: There is a positive relationship between the implementation of *Innovativeness* in the school environment and *Learner Behaviour* in the participating secondary schools.

- H^{2D}: There is a positive relationship between the implementation of *Innovativeness* in the school environment and *Learners* in the participating secondary schools.
- H^{3A}: There is a positive relationship between the implementation of *Risk-taking* in the school environment and *School Leadership* in the participating secondary schools.
- H^{3B}: There is a positive relationship between the implementation of *Risk-taking* in the school environment and *Teaching and Learning* in the participating secondary schools.
- H^{3C}: There is a positive relationship between the implementation of *Risk-taking* in the school environment and *Learner Behaviour* in the participating secondary schools.
- H^{3D}: There is a positive relationship between the implementation of *Risk-taking* in the school environment and *Learners* in the participating secondary schools.
- H^{4A}: There is a positive relationship between the implementation of *Pro-activeness* in the school environment and *School Leadership* in the participating secondary schools.
- H^{4B}: There is a positive relationship between the implementation of *Pro-activeness* in the school environment and *Teaching and Learning* in the participating secondary schools.
- H^{4C}: There is a positive relationship between the implementation of *Pro-activeness* in the school environment and *Learner Behaviour* in the participating secondary schools.

- H^{4D}: There is a positive relationship between the implementation of *Pro-activeness* in the school environment and *Learners* in the participating secondary schools.
- H^{5A}: There is a positive relationship between the implementation of *Competitive Aggressiveness* of the school and *School Leadership* in the participating secondary schools.
- H^{5B}: There is a positive relationship between the implementation of *Competitive Aggressiveness* of the school and *Teaching and Learning* in the participating secondary schools.
- H^{5C}: There is a positive relationship between the implementation of *Competitive Aggressiveness* of the school and *Learner Behaviour* in the participating secondary schools.
- H^{5D}: There is a positive relationship between the implementation of *Competitive Aggressiveness* of the school and *Learners* in the participating secondary schools.

1.6 SCOPE OF THE STUDY

This section describes the scope of the study and consists of the field and the geographical demarcation of the study.

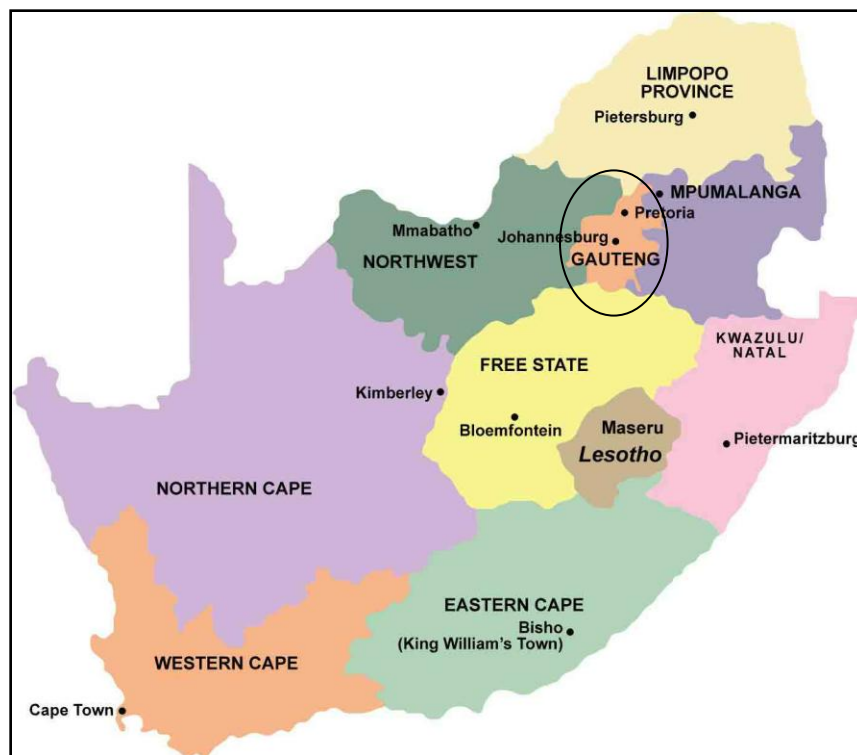
1.6.1 Field of the study

The field of this study falls within the subject discipline of entrepreneurship with specific reference to assessing the entrepreneurial orientation of Principals and School Management Teams (SMTs), in selected public secondary schools in Gauteng, South Africa.

1.6.2 The geographical demarcation

The study will be conducted within selected public secondary schools in Gauteng, South Africa. Covering only 1.4% of South Africa's land area, the small province of Gauteng contributes around 34% to the national economy and 7% to the GDP of the entire African continent (Gauteng Growth and Development Agency, 2014).

Figure 1.2: Geographical map of the study region



Source: maps.google.co.za

Education is well-organised in the province of Gauteng. In 2015 a total of 151 245 learners registered for the Grade 12 examination. Over 38 000 of the candidates obtained a bachelors pass; almost half of these learners were from township schools. The Bachelor's Pass is the best possible pass level a learner can achieve, and it qualifies learners to study at any tertiary institution in South Africa. The Gauteng Department of Education contributed 26% of all bachelor passes nationally. Sedibeng

East was the best performing district nationally, with a pass rate of 94.4%. All districts in Gauteng obtained a pass rate of above 70%. Out of the Top 10 best performing districts in the country, seven were in Gauteng. The pass rate for mathematics was 69% (Gauteng Department of Education, 2016).

1.7 RESEARCH METHODOLOGY

The research methodology will comprise of a literature review and an empirical study:

1.7.1 Literature review

In order to broaden the body of knowledge of entrepreneurship and entrepreneurial orientation and to determine the impact of the dimensions of entrepreneurial orientation on *Perceived school success*, a literature review will be conducted, as explained in the following section.

In order to conduct the literature review, various publications will be sourced. These sources include:

- Articles published in journals such as *Journal of Enterprising Culture*, *Journal of Business Venturing*, *International Journal of Public Sector Management*, *Journal of Vocational Behaviour*, *Strategic Management Journal*, *European Journal of Innovation Management*.
- Various text books.
- Internet articles.
- Dissertations of previous doctorate and magister students.
- Annual reports of the Department of Basic Education.

The following topics will be researched:

- The concepts of entrepreneurship and intrapreneurship.
- The concept of entrepreneurial orientation.
- The current state of education in public secondary schools in South Africa.
- An investigation into the factors that relate to the perceived success of public secondary schools.
- An investigation into public entrepreneurship and the public school as an entrepreneurial entity.
- Measuring instruments available to assess entrepreneurial orientation.
- Investigating entrepreneurial orientation within the management of public secondary schools in Gauteng, South Africa.

1.7.2 Empirical study

The empirical study consists of the research paradigm, the design of the questionnaire, the determination of the study population data collection and the statistical analyses.

1.7.2.1 Research paradigm

The research paradigm adopted in this study, to test the various hypotheses and to achieve the research objectives will be described firstly. This is followed by a discussion of the literature review and empirical investigation, as determined by the adopted research paradigm.

In light of the study's problem statement and the subsequent research objections, a positivistic paradigm was deemed most appropriate to measure the respondents' perceptions of how entrepreneurial orientation influence the perceived success at their respective schools. Taylor and Medina (2013:1) explain that this type of research paradigm strives to investigate, confirm and predict law-like patterns of behaviour, and is commonly used in graduate research to test theories or hypotheses. This is particularly useful where very large sample sizes are involved. Generally its focus is on the objectivity of the research process. The positivist paradigm mostly involves quantitative methodology.

A **quantitative research design** was used in this study. Bryman and Bell (2007:28) describe quantitative research as research quantifying data into numerical factors, allowing for exact measurements. Cooper and Schindler (2008:164) highlight that quantitative research provides the opportunity to use statistics to determine certain outcomes and to analyse data. Bryman *et al.* (2014:39) explain that in quantitative methodology, the researcher assigns numbers to observations. It requires methods such as experiments and surveys to describe and explain phenomena. The methods could include techniques, such as observations, preliminary investigations, quantitative analysis and questionnaires. Saunders, Lewis and Thornhill (2016:166) state that quantitative research is undertaken to examine questions about relationships between variables, as in the case of the present study.

The questionnaire design, study population, sample, data collection methods and primary data analysis technique are briefly discussed in the following sections.

1.7.2.2 Questionnaire design

A measuring instrument in the form of a questionnaire was compiled to assess the dependent and independent variables. Operationalisation of the variables was done by using reliable and valid items, obtained with existing measuring instruments, used in previous studies, as well as self-generated items based on the literature study.

Section A of the questionnaire comprises of a questionnaire developed by Lotz and Van der Merwe (2013:187), that was adapted to measure entrepreneurial orientation within selected public secondary schools in the Gauteng Province (Lumpkin & Dess 2001:442). The questionnaire measures five constructs regarding entrepreneurial orientation. These include autonomy, innovation, risk-taking, pro-activeness and competitive aggressiveness.

After a literature study, Section B of the questionnaire was developed. The literature study identified 13 dependent variables, which will be referred to as the set of determinants that predicts the *perceived school success*. The dependent variables are: *leadership, high quality of teaching and learning, staff development, emphasis on academics, parental involvement, monitoring pupil performance, evaluating school performance, discipline, feedback, high expectations, safe and orderly schools, learner self-esteem and class size*.

The 13 dependent variables were further grouped into four meaningful main categories. The purpose of this grouping was to meaningfully reduce the number of dependent variables in order to determine the correlation between the dependent and the independent variables. After the grouping, the four main categories are: **School Leadership** (*leadership, evaluating school performance, and staff development*), **Teaching and Learning** (*emphasis on academics, class size and high quality of teaching and learning*), **Learner Behaviour** (*safe and orderly schools, discipline, and parental involvement*), and **Learners** (*learner self-esteem, monitoring pupil performance, feedback and high expectations*).

Section C depicts data from respondents regarding their profiles and characteristics. The respondents' age, gender, race, highest academic qualification and post level within the specific school, were gathered.

For the purpose of this study a five-point Likert scale was used. Zikmund, Babin, Carr and Griffen (2013:316) define Likert scale questions as a measure of attitudes designed

to allow respondents to rate how strongly they agree or disagree with statements, ranging from very positive to very negative attitudes toward some object. The Likert scale used in this study gave statements such as strongly agree (1), agree (2), neutral view (3), disagree (4) and strongly disagree (5). The respondent had to choose to which extent he or she agreed or disagreed with the research statement given.

The ultimate objective of the questionnaire is to collect data to determine the linear relationship between the constructs of entrepreneurship and the perceived school success.

1.7.2.3 Study population and sample

The study population was educators, heads of departments, deputy principals and principals at selected public secondary schools in the province of Gauteng in South Africa. Gauteng was the top-performing province in South Africa in 2014 and second best in 2015 (Department of Basic education, 2014, 2015).

Schools were chosen based on their Grade 12 results of 2014 and 2015. Sampling was done through convenience sampling of 25 public secondary schools that were grouped into three different categories as indicated below:

Group A consisted of well-resourced schools that obtained a 100% pass rate for the past five years. These schools were located in the urban areas of Pretoria, Johannesburg, Brakpan and Randfontein.

Group B consisted of former Model C schools that obtained a pass rate of 100% in the 2014 and 2015 Grade 12 examinations. These were ordinary suburban schools located in different areas of Gauteng, serving the immediate population that they were originally intended for, and were located in Carletonville, Fochville, Westonaria, Vereeniging, and Magaliesburg.

Group C consisted of poor township schools that obtained pass rates well beyond expectation. Some of the schools were located in the townships of Khutsong (Carletonville), Kagiso (Krugersdorp), Kokosi (Fochville), Munsieville and the peri-urban areas of Krugersdorp, Randfontein and Magaliesburg.

1.7.2.4 Data collection

The researcher had to obtain permission from the Gauteng Department of Education to perform the study. Two important conditions were that no school or educator would be identified during the study and all participation in the study had to be voluntary. After the approval of the application, the principals of the various identified schools were contacted to request their permission to conduct the research in their respective schools.

Each school appointed a liaison officer between the researcher and the school. The questionnaires were printed and sent to the different schools by courier. The respondents were allowed ten working days to complete the questionnaire, although it was estimated that the time needed to complete a questionnaire was only 15 minutes. Unfortunately some schools only returned the completed questionnaires after one month.

1.7.2.5 Statistical analyses

The first step in the data analyses is to perform a factor analysis to determine the validity of the questionnaire. Zikmund *et al.* (2013:595), explain that a factor analysis is a prototypical multivariate, interdependence technique.

According to Cooper and Schindler (2008:577), factor analysis is a general term for several specific computational techniques. Field (2009:628) explains that factor analysis is a technique for identifying groups of clusters of variables.

For the purpose of this study, an exploratory factor analysis (EFA) was conducted to identify the unique factors present in the data, confirming the discriminant **validity** of the measuring instrument used. Bartlett's test of sphericity was performed to test the significance of each question and its relationship. A Kaiser-Meyer-Olkin Measure of sampling adequacy (KMO) test was performed to determine the appropriateness of the data. Field (2005:640) explains that the KMO test shows whether the sample is adequate and the Bartlett's test of sphericity indicates whether the patterns of correlations will yield reliable factors.

To confirm the **reliability** of the measuring instrument, Cronbach-alpha coefficients were calculated. Cronbach-alpha coefficients range in value from 0 to 1. The higher the score, the more reliable the generated scale is. A score of 0.7 is seen to be an acceptable reliability coefficient. Satisfactory Cronbach-alpha coefficients were reported for all the constructs identified during the EFA, confirming the reliability of the measuring instrument (Field, 2009:628).

In order to assess whether the independent variables have an influence on the dependent variables, a **multiple regression analysis** was performed. The primary unit of measurement was the different schools in the three different categories. It was therefore necessary to perform a **Hierarchical linear modelling** to determine the variances in the effect sizes between the schools, in relation to the independent and dependent variables. In order to determine the level of correlation between the independent variables and the four broad factors of dependent variables, a **Spearman's rho** was conducted.

A detailed discussion of data analyses is presented in Chapter 6.

1.8 LIMITATIONS OF THE RESEARCH

The study attempted to contribute to improving the success of public secondary schools, by concentrating on the necessity and applicability of an entrepreneurial

orientation in the schools. The study was, however, limited to the possible entrepreneurial actions of 25 performing schools, located in different areas of Gauteng.

The study was further limited to the internal environment of the schools and did not account for external factors. The interpretation of the findings should therefore be handled with care, as it cannot be generalised.

The study considered entrepreneurial orientation as one of the many success factors of a school. Success factors that were not considered include, among others: the geographic location of the school; the socio-economic status and level of education of the community where the school was situated; available resources; and the demographic composition of the school.

1.9 CONTRIBUTION OF THE STUDY

An effective education system can bring a number of benefits to a society. The contribution of education very much depends on the type and quality of education which society imparts. The educational system can pave the way for social and sustainable development, only when everybody gets fair and just opportunities to cherish their rights to education (Bazaz, 2016:40).

This study contributes to the body of knowledge regarding the importance of education in any country. It specifically highlights the problems in the South African system, in spite of various interventions. Despite the fact that the budget for education in South Africa has doubled over the past few years, the quality of education remains very poor, and the output rate has not improved (Modisaotsile, 2012:2).

The importance of entrepreneurship is highlighted in the study, as a remedy to change and the saving of schools. Eyal (2007:3) notices that the entrepreneurial spirit driving managers to initiate, innovate, change, and influence their surroundings is visible and important in various systems, including public institutions and educational systems.

Even though the survival of public schools is generally assured, when schools stagnate they risk losing their relevance and legitimacy in the eyes of the society they serve, and thus their social function (Drucker, 1985). This study aims to depict the advantages of entrepreneurship to be employed by school leaders as a basic mechanism to increase a school's adaptive capacity and ability to maintain its relevance in conditions of uncertainty.

The study focuses strongly on entrepreneurial leadership. Phelan *et al.* (2013:2) emphasise that previous research suggests that businesses which exhibit an *entrepreneurial orientation*, tend to perform better than their peers and that the effect is particularly pronounced in more competitive environments. While originally applied to for-profit organisations, studies of entrepreneurial orientation have recently been extended to non-profit organisations, such as public schools.

Xaba and Malindi (2010:76) find that schools are seen as harmonious systems where people gravitate towards system norms and much attention is devoted to optimising routine activities. The pressure for accountability and standardisation inhibit curiosity and the exploration of innovative ideas. This study aims to clearly depict the role of the school principal in the process of taking the lead in initiating change by taking advantage of the opportunities within their school environments, in order to mobilise resources and promote new initiatives. Within this context, it is imperative for policy makers and school governing bodies to realise that the duties and influence of a principal are far more complex than just to manage an institution. Serious consideration must be given to an entrepreneurial orientation and mind-set when appointments are made.

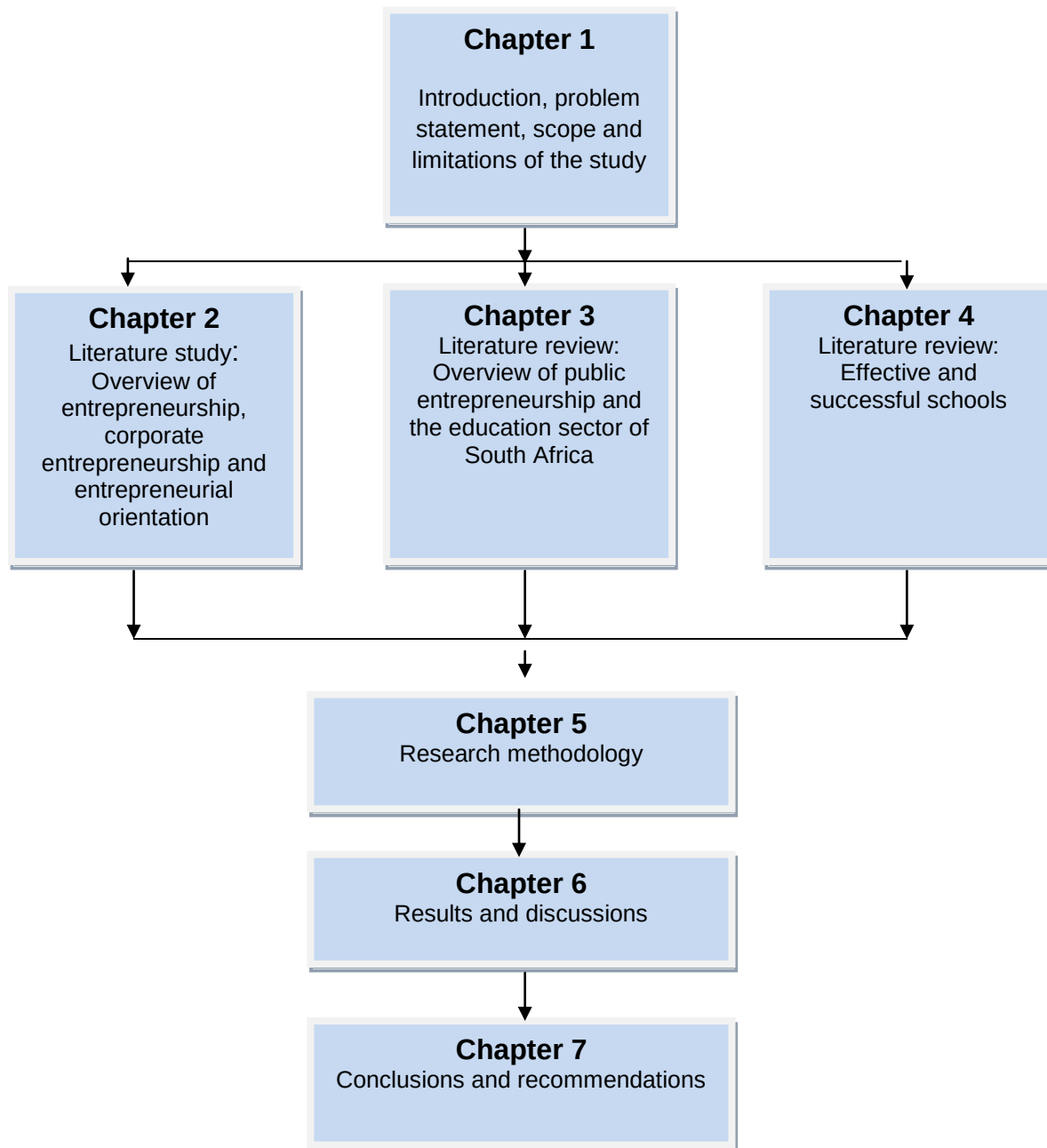
From an empirical perspective, the use of multiple regressions like Hierarchical Linear Modelling and Spearman rho, make a valuable contribution to the body of knowledge of entrepreneurial orientation and perceived school success. The multiple regressions revealed that there are positive relationships between most of the constructs of entrepreneurial orientation (Autonomy, Innovativeness, Pro-activeness and Competitive

Aggressiveness). The Hierarchical Linear Modelling was performed to determine the difference of the effect sizes of the three different groups of schools in relation to the success factors. The results were marginal. The assumption can be made that the differences between the groups of schools are in most cases not very significant and they all have the same inclination towards success. The difference in examination results could possibly be attributed to factors such as socio-economic circumstances, financial and other physical resources, feeding areas, and the academic backgrounds of parents.

1.10 LAYOUT OF THE STUDY

The study consists of seven chapters and includes the nature and scope of the study, literary research on the independent variables, the dependent variables, a special focus on the current situation in the South African education system, as well as the ultimate influence of entrepreneurial orientation on school success. The study also includes empirical research, resulting in an analysis of data collected, and finally, recommendations. The layout of the study is graphically explained in Figure 1.3 on page 28 and thereafter explained chapter by chapter.

Figure 1.3: Layout of the study



Chapter 1 – Introduction, problem statement, scope and limitations of the study

Chapter 1 provides the background to the study. As an introduction, the current state of the public secondary schooling system in South Africa is discussed. The schooling

system is under suspicion and one of the major contributing factors seems to be the leadership ability of those in charge of educational institutions.

From the problem statement, primary and secondary objectives for the study are derived. The primary objective is to assess the level and impact of entrepreneurial orientation on the perceived success of public secondary schools.

The scope of the study defines the field of study. It introduces the field under investigation and follows with a discussion of the research paradigm. The research was done through a literature review and empirical research; which was completed by means of a questionnaire. The study was based on a predefined study population, after which the gathered data was statistically analysed.

Finally the limitations of the study are discussed and the chapter layout for the study is set.

Chapter 2 – Literature review: Overview of entrepreneurship, corporate entrepreneurship and entrepreneurial orientation

Chapter 2 is a literature study on entrepreneurship and corporate entrepreneurship. It supplies definitions, attributes of the entrepreneur, as well as demographic and individual characteristics of the entrepreneur. Entrepreneurial orientation is defined and the variables affecting entrepreneurial orientation are determined. The measuring instruments of and the items measuring entrepreneurial orientation are also investigated.

Chapter 3 – Literature review: Overview of public entrepreneurship and the education section of South Africa

Chapter 3 gives an overview of public entrepreneurship. It ultimately shows how public schools form part of public entrepreneurship. The chapter shows clearly how an

educational institution can be organised on the principles of entrepreneurship. The role of the school principal as a leader of change in an entrepreneurial institution is discussed accordingly. This chapter gives a detailed picture of the state of education in South Africa and explains how an entrepreneurial posture can give direction to the education sector in South Africa.

Chapter 4 – Literature review: Effective and successful schools

Chapter 4 is a literature study on the factors that might determine the success of a school. The purpose is to find common denominators that are supposed to be present at a school, in order to classify the school as successful.

Chapter 5 – Research methodology

Chapter 5 contains an explanation of the research methodology that was followed to complete the empirical study. The process starts with defining the scope of the study and the research hypotheses for the construction of the hypothesised model. The research methodology comprise of the literature review and empirical research. The empirical research comprises of the research paradigm, questionnaire design, sampling, data collection and the statistical analysis.

Chapter 6 – Results and discussions

Chapter 6 comprises of an analysis of the data acquired. The demographics of the respondents are explained and the outcome of the factor analysis is described. The data was analysed through a multiple linear regression, Hierarchical linear modelling was conducted and finally a Spearman rho was performed. These were performed to determine the level of correlation between the variables. The findings of the statistical analysis are described in this chapter.

Chapter 7 – Conclusions and recommendations

The purpose of this chapter is to validate a scale to measure the entrepreneurial orientation and success in South African public secondary schools. In Chapter 7 conclusions are drawn in terms of the prevalence and extent of entrepreneurial orientation among the management teams of the selected schools and to the extent to which this may correlate with the researched success factors of schools. The chapter includes recommendations for further research as well as the extent to which the research and methodology objectives were met.

CHAPTER 2

OVERVIEW OF ENTREPRENEURSHIP, CORPORATE ENTREPRENEURSHIP AND ENTREPRENEURIAL ORIENTATION

2.1 INTRODUCTION

The competitive landscape in many industries is marked by intense competition amongst existing players and the emergence of many focused competitors targeting specific segments of the market (Ramachandran, Devarajan & Ray, 2006:85). In addition, the macro environment is characterised by rapid technological progress in many fields, resulting in current solutions to customer problems becoming obsolete. Baruah and Ward (2015:811) agree that the current economic environment is getting progressively more competitive, demanding and challenging for most businesses. Organisations are currently witnessing a significant rise in globalisation trends and revolutionary changes in technologies. This gives rise to several organisational complexities. In order to survive and be successful, organisations need to tackle these complexities by constantly working on their products, services and business models to maintain a competitive advantage (Baruah & Ward, 2015:811).

Mohanty (2006:99) asks why some businesses operating under competitive conditions continue to achieve sustained high performance. Ramachandran *et al.* (2006:85) add that in this scenario, any business that is not continually developing, acquiring and adapting to new technological advances and to the changing business environment, may be making, in the words of Merrifield (1993), “the intentional strategic decision to be out of the business within years”.

Thornberry (2001:526) explains that many large businesses seek ways to reinvent or revitalise their entrepreneurial roots. These companies often long for some of the spark, innovation, speed and risk-taking that they once had, but have slowly eroded under the

weight of size, bureaucracy, complex processes and hierarchy. Corporate entrepreneurship encompasses a set of activities, attitudes and actions that are believed to help large companies regain some of this lost spark.

Mohanty (2006:99) identifies that the generic secret to successful growth lies in how companies approach the value of innovation of corporate entrepreneurship. Ramachandran *et al.* (2006:85) explain that the changes in the world of doing business have highlighted the need for companies to become more entrepreneurial. Companies around the globe are indeed attempting to foster entrepreneurship, so that business opportunities are perceived and exploited. Many companies have succeeded in their endeavour to do so and have developed new approaches to innovate and create new businesses, thus achieving profitable growth. Change, innovation and entrepreneurship describe what successful companies do to compete. Leyden (2016:553) agrees by stating that economic growth can only occur through entrepreneurial action. Baruah and Ward (2015:811) stress that an innovation culture attained through entrepreneurial initiatives, can lead to considerable organisational development in terms of firm performance, innovativeness, profitability and competitiveness.

Eyal and Inbar (2003:222) claim that public schools are state-appointed suppliers of a service, funded by the government. Their survival is therefore seldom held in doubt (Drucker, 1985). On the other hand, schools are operating in an environment of increasing uncertainty. This uncertainty does not stem from competition, but rather from their openness and consequent exposure to rapid environmental changes (Drucker, 1985). Eyal and Inbar (2003:222-223) explain that the fast pace of environmental changes and the limited capacity to predict them, together with the multiple factors operating in the schools' environments as well as their dependence on external resources, all serve to increase the uncertainty under which schools operate. Even though schools are not measured by standards of financial profit, in situations of stagnation they might face losing their relevance to the society they serve. It would appear that the need for new initiatives, flexibility and self-renewal, are basic

prerequisites in preventing the creation of gaps between the societal-environmental demands and the function of the school.

2.2 DEFINING ENTREPRENEURSHIP

Tan, Williams and Tan (2005:355) explain that the French roots of the word *entrepreneur* originate from the term *enterprise*. The German equivalent term is *unternehmen*, meaning *to undertake*. The consensus of the meaning of the word entrepreneur is a person who undertakes risks to begin or maintain a productive operation, usually in an independent capacity. Luchsinger and Bagby (2001:10) add that definitions of the entrepreneur generally refer to one who organises, manages and assumes the risks of a business or enterprise.

Ahmad and Seymour (2008:6) show that the French economist Cantillon is generally accredited with being the first to coin the phrase, in the context of what we view today as entrepreneurship, in about 1730. Loosely, he defines entrepreneurship as self-employment of any sort, and entrepreneurs as risk-takers, in the sense that they purchased goods at certain prices in the present to sell at uncertain prices in the future. McMullan and Long (1990) agree that entrepreneurship is self-employment with an uncertain return. Knight (1921) finds that entrepreneurs attempt to predict and act upon change within markets. The entrepreneur bears the uncertainty of market dynamics (Ahmad & Seymour, 2008:8).

Ahmed and Seymour (2008:2) add that Schumpeter (1934) describes an entrepreneur as a person who carries out new combinations, which may take the form of new products, processes, markets, business forms, or sources of supply. Bull and Willard (1993:186) hold that an entrepreneur is in the process of carrying out new combinations, causing discontinuity. The role is completed when the function is completed. The person may be an employee within an existing business or may start a new venture. Mokaya, Namusonge and Sikalieh (2012:129) explain that Schumpeter rejected the widely accepted view of the market as a perfect competitive construct and

instead viewed it as a dynamic process, driven by creative destruction. Schumpeter was the first person to view entrepreneurship as the act of innovation. Luchsinger and Bagby (2001:10) find that novelty, risk, initiative and independence are found in most of the definitions. In contrast, Gartner (1988:26) insists that entrepreneurship is the creation of businesses. He is careful to specify that this is not offered as a definition, but rather as an attempt to change a long-held and tenacious viewpoint in the entrepreneurship field toward *what* the entrepreneur does, not *who* the entrepreneur is (Sharma & Chrisman, 1999:12).

Schumpeter (1934) defines entrepreneurs as innovators who take advantage of change, including: (i) the introduction of new (or improved) goods; (ii) the introduction of a new method of production; (iii) the opening of a new market; (iv) the exploitation of a new source of supply; and (v) the re-engineering/organisation of business management processes. Schumpeter's definition therefore equates entrepreneurship with *innovation* in the business sense; that identifies market opportunities and uses innovative approaches to exploit those (Ahmad & Seymore, 2008:8).

Kritikos (2014:3) explains that entrepreneurship is the capacity for *innovation* and the calibre to introduce innovative techniques in business operations. The Commission of the European Communities (2003) also emphasises the role of innovation and creativity with their definition that entrepreneurship is the mind-set and process to create and develop economic activity, by blending risk-taking, creativity and/or innovation with sound management, within a new or an existing organisation. Churchill (1992:586) believes that increased consensus has been attained on the concept of entrepreneurship as the process of uncovering and developing an opportunity to create value through *innovation*, and seizing that opportunity without regard to either resources or the location of the entrepreneur – in a new or existing company.

Spinelli and Adams (2016:77) explain that entrepreneurship is a truly global phenomenon and is flattening and democratising the world. Entrepreneurship is defined as a way of thinking, reasoning and acting that is opportunity obsessed, holistic in

approach and leadership balanced, for the purpose of value creation and capture. Entrepreneurship results in the creation, enhancement, realisation and renewal of value, not just for owners, but for all parties and stakeholders. At the heart of the process are the creation and/or recognition of opportunities, followed by the will and initiative to seize these opportunities. Sikalieh, Mokaya and Namusonge (2012:132) agree that entrepreneurship can be seen as the process of constantly scanning the environment, identifying business opportunities, marshalling resources to implement those opportunities and finally launching an enterprise that grows by making profit. Deakins and Freel (2003:7) also portray entrepreneurship as the process of creating something different with value, by devoting the necessary time and effort, assuming the accompanying financial, psychological and social risks; and receiving the resulting rewards of monetary and personal satisfaction.

Morris and Jones (1999:73) argue that the entrepreneurial process has attitudinal and behavioural components. Attitudinal refers to the willingness of an individual to embrace new opportunities and take responsibility for effecting change. Behaviourally, the process includes the set of activities required to a) identify and evaluate an opportunity, b) define a business concept, c) identify the needed resources, d) acquire the necessary resources, and e) implement, operate and harvest the venture.

Timmons and Spinelli (2009:111-116) suggest that the key factors in the Timmons Model of the Entrepreneurial Process are the entrepreneur, the founding team, the opportunity, and the resources that are mustered to start the new business. The key ingredient is the entrepreneur. The entrepreneur gathers the resources that are necessary to start a business to capitalise on his or her opportunity. Explicit in the Timmons framework is the notion that the entrepreneur and the provider of the capital will be rewarded with profits, and that both are commensurate with the risk and effort involved in starting, financing, and building the business. The entrepreneur usually risks career, personal cash-flow, and some or all of his or her net worth. In an ideal situation, all this is quantified in a business plan before the business is operational.

Coulter (2003:6) defines entrepreneurship as the process whereby an individual or group of individuals use organised efforts to pursue opportunities to create value, and grow by fulfilling wants and needs through innovation and uniqueness, no matter what resources the entrepreneur currently have. Ireland, Hitt and Sirmon, (2003:965) agree that entrepreneurship is a context dependent social process, through which individuals and teams create wealth, by bringing together unique packages of resources, in order to exploit marketplace opportunities.

Entrepreneurs are different from small business owners. Carland, Hoy, Boulton and Carland (1984:355) argue that small business owners are primarily concerned with securing an income to meet their immediate needs and they do not usually engage in innovation, whereas entrepreneurs are focussed on higher achievement motivation and risk-taking and are drawn to innovation and change. The entrepreneur is characterised by a preference for creative activity, manifested by some innovative combination of resources for profit and will employ strategic management practices in the business. Eroglu and Picak (2011:150) conclude their research that entrepreneurship is mostly about risks, innovation, and creative thinking, and that the entrepreneur is the one who creates and innovates by recognising opportunities and accepting risks and failures.

Gartner, Bird and Starr (1991:26) consider entrepreneurship as an individual, an organisational level behavioural phenomenon, or a process of emergence. Emergence-related behavioural intentions and behaviour, such as business formation and innovation, differentiate entrepreneurship from non-entrepreneurship, which refers more to the management of existing or customary activities. Bruyat and Julien (2000:173) are of the viewpoint that entrepreneurship is concerned with the process of change, emergence and creation; creation of new value but also change, and creation of the individual.

Antoncic and Hisrich (2003:9) argue that at the individual, as well as the organisational level, entrepreneurship can be seen as either outcome-based behaviour or its intentions, which can be observed in a series of smaller events, or in one or a few larger

events, such as new venture formation or breakthrough innovation. Entrepreneurship can be viewed in both absolute terms (new business vs. no new business), as well as in relative terms (more entrepreneurial vs. less entrepreneurial). New business creation is the most obvious manifestation of entrepreneurship. Mokaya *et al.* (2012:132) are of the opinion that entrepreneurship consists of two types; *opportunity-based entrepreneurship* and *necessity-based entrepreneurship*. In opportunity-based entrepreneurship, an entrepreneur perceives a business opportunity and chooses to pursue this as an active career, whereas in necessity-based entrepreneurship, an entrepreneur is left with no other viable option to earn a living. It is not choice but a compulsion which makes him/her choose entrepreneurship as a career.

Caliendo, Fossen and Kritikos (2012:397) show that recent research has identified self-employment as a measurable proxy for the concept of entrepreneurship. Van Aardt (2008:11) provides a process-orientated definition of entrepreneurship, namely the act of initiating, creating, building and expanding an entrepreneurial team and gathering other resources to exploit an opportunity in the marketplace for long-term gain. This definition focuses on growth, expansion and long-term financial gain. For this reason a small business that is aimed only at the survival of its owner, cannot be regarded as an entrepreneurial venture.

Gartner (1990:17) is of the opinion that a universal definition has yet to emerge, but suggests that we are talking about a single phenomenon, albeit one with multiple components. The relative importance of these components can vary according to the environmental context within which an entrepreneurial event occurs. However, one definition seems to incorporate all aspects of the entrepreneurial phenomenon. Morris and Kuratko (2002:22) describe entrepreneurship as the “process of creating value by bringing together a unique package of resources to exploit an opportunity” (Stevenson, Grousbeck, Roberts & Bhidé, 1999:23). The definition has four keys. Firstly, *entrepreneurship involves a process*. It is manageable, can be broken down into steps or stages and is on-going. Moreover, as a process, entrepreneurship can be applied in any organisational context. Secondly, *entrepreneurs create value where there was none*

before. They create value within businesses and they create value in the marketplace. Thirdly, *entrepreneurs put resources together in a unique way*. Unique combinations of money, people, procedures, technologies, materials, facilities, packaging, distribution channels and other resources represent the means by which entrepreneurs create value and differentiate their efforts. Fourthly, *entrepreneurship is opportunity-driven behaviour*. It is the pursuit of opportunity without regard to the resources currently controlled (Stevenson *et al.*, 1999). The unique combination of resources fits well with some unrecognised or unmet opportunity (Morris & Kuratko, 2002:22).

Cornwall and Perlman (1990:29) believe that attention should be shifted away from *whom* entrepreneurs are to *what* they do, in order to get a clearer definition of entrepreneurship. It is evident that an array of definitions has been formulated over the years, with some common concepts, such as renewal and innovation.

Naudé (2008:2) says that it is important to note that Wennekers and Thurik (1999:30) have identified thirteen distinctive roles of an entrepreneur. The reason for this multiplicity of definitions/roles is due to the fact that entrepreneurship is studied in virtually all disciplines ranging from social anthropology to organisational theory to mathematical economics (Henrekson, 2007:717).

People seem to hold widely disparate views regarding *who* an entrepreneur is, *what* an entrepreneurial venture looks like and the nature of the activities that constitute entrepreneurial behaviour. Morris and Kuratko (2002:22) identify seven main perspectives from literally hundreds of perspectives that have been presented. These seven perspectives of an entrepreneur are discussed below (Morris & Kuratko, 2002:23):

Creation of wealth: Entrepreneurship involves assuming the risks associated with the facilitation of production in exchange for profit.

Creation of enterprise: Entrepreneurship entails the founding of a new business venture where none existed before.

Creation of innovation: Entrepreneurship is concerned with unique combinations of resources that make existing methods or products obsolete.

Creation of change: Entrepreneurship involves creating change by adjusting, adapting and modifying one's personal repertoire, approaches and skills to meet different opportunities available in the environment.

Creation of employment: Entrepreneurship is concerned with employing, managing and developing the factors of production, including the labour force.

Creation of value: Entrepreneurship is the process of creating value for customers by exploiting untapped opportunities.

Creation of growth: Entrepreneurship is defined as a strong and positive orientation towards growth in sales, income, assets and employment.

2.3 ATTRIBUTES OF THE ENTREPRENEUR

Joseph Schumpeter (1934) was one of the first economists who explicitly focussed on entrepreneurship. When describing entrepreneurs, Schumpeter noticed that entrepreneurial action requires aptitudes that are present in only a small fraction of the population. According to Schumpeter (1934), an entrepreneur is a leader, willing to break through ordinary constraints. Entrepreneurs are characterised by an autonomous drive to achieve and create for its own sake. There is also the joy of creating, of getting things done, or simply of exercising one's energy and ingenuity (Ahmad & Seymore, 2008:2).

Sajilan, Hadi and Tehseen (2015:36) maintain that every business strives to achieve an outstanding performance. Without superior performance of any business, it cannot survive. Thus, it is essential to investigate the impact of factors that contribute towards the success of a firm. The entrepreneur is a person who builds up a business and does creative things. Jones, Macpherson, Thorpe and Ghecham (2007:289) agree that the success of small businesses heavily depend on the human capital of their owner-managers. Zhang and Bruning (2011:83) note that when entrepreneurs start a business, they bring a unique set of human capital to their businesses, as part of the resource endowment to the firm, including, but not limited to, their skills, experience, and personality. As such, the business becomes an extension of the entrepreneur as an individual.

Salijan *et al.* (2015:37) argue that entrepreneurs play the most vital role in the success of any business. Some researchers have given more attention to external factors such as government policies. They explain that several studies have investigated the influence of entrepreneurial characteristics on business performance, by utilising a personality trait approach (Frese, Brantjes & Hoorn, 2002; Pearson & Chatterjee, 2001), or placed more emphasis on the demographic characteristics of the entrepreneurs (Bates, 1995; Davidsson, 1995). Salijan *et al.* (2015:37) also argue that the entrepreneurs' characteristics are the valuable, unique and rare resources of the firms that contribute towards their sustainable competitive advantage and superior performance.

Welmilla, Weerakkody and Ediriweera (2011:6) explain that the demographic characteristics of people also shape their behaviour towards entrepreneurship. Many studies have highlighted the role of demographic characteristics such as the age, religion, gender, experience, background and education of entrepreneurs in relation to their entrepreneurial behaviour and their firm's performance.

For the purpose of this study, only age and gender were explored as demographic variables shaping entrepreneurial behaviour.

2.3.1 Demographic characteristics of entrepreneurs

- **Age**

Aapola (2002:296) finds that *age* has traditionally been one of the key variables in contemporary empirical social research, routinely used to categorise people and to explain differences between them. Levesque and Minniti (2006:188) explain that the percentage of individuals attempting the creation of new firms is highest among people between the ages of 25 and 35. When considering employment status choices, younger individuals are more likely to start a new firm than older individuals. They argue that this is the result of an age effect which with everything else staying the same, reduces the relative return to entrepreneurship as individuals become older. Individuals divide their time between income producing activities and leisure. For each age, there exists an individual specific division of time between work and leisure, that maximises that individual's expected utility. Antoncic (2009:363) totally disagrees with other researchers and states that a person's age is not related to business success. Sajilan *et al.* (2015:38) add that although there are different views of researchers regarding the impact of the age of individuals on their entrepreneurial behaviour and intentions, most researchers agree that individuals show their intention towards entrepreneurship in the age range of 25 – 44.

- **Gender**

Sajilan *et al.* (2015:39) explain that a number of studies have investigated the role of *gender* in the field of entrepreneurship and venture success (Grilo & Thurik, 2005; Van der Kuip & Verheul, 2004). Shinnar, Giacomini and Janssens (2012:465) warn that it is generally accepted that men have stronger entrepreneurial intentions than women (De Bruin, Brush & Welter, 2007:332; Díaz-García & Jiménez-Moreno, 2010:261). Furthermore, Farrington, Venter and Neethling (2012:1) view that in South Africa, men are more likely than women to undertake entrepreneurial activities. Similarly, white South Africans are more likely to start new business ventures than other ethnic groups.

Shinnar *et al.* (2012:469) find that gender differences were also identified in the importance of barriers to entrepreneurship. For example, Wagner (2007:16) shows that fear of failure have a smaller negative influence on the propensity to step into self-employment for men than for women.

Ferk, Quien and Posavec (2013:70) analyse the abilities of males and females regarding leadership and management, and conclude that females can be better entrepreneurs, because of their more managerial competencies, than males. Whereas Zeffane (2012:67) provide statistical evidence that both males and females have the same overall entrepreneurial potential.

2.3.2 Managerial and entrepreneurial characteristics

According to Ferk *et al.* (2013:70), there are numerous definitions and lists of an entrepreneur's qualities. One of the most influential is the Gibb (1987, cited by Baranovic, Stribic & Domovic, 2007: 342) list of entrepreneurs' characteristics: taking initiative, persuasion, (reasonable) risk-taking, flexibility, creativity, independence, problem-solving, need for accomplishments, imagination, belief in controlling your own destiny, leadership abilities and work persistence. Zang and Bruning (2011:82) add that numerous studies have tried to identify the main characteristics of entrepreneurs while launching a new business.

- **Need for achievement**

Sajilan *et al.* (2015:40) note that people with a need for achievement are those individuals who want to be high achievers and therefore have a strong desire for success, establishing challenging standards for themselves. These people always strive to get the best results and seek improvement in their actions to achieve outstanding outcomes. A positive relationship has been found, in a number of studies, between the need for achievement and entrepreneurial orientation (Miller & Toulouse, 1986:1405; Lumpkin & Dess, 1996:152). Lumpkin and Dess (1996:152) argue that managers and

entrepreneurs with high achievement needs are more entrepreneurially oriented, which lead to superior performance of the companies. Zhang and Bruning (2011:86) hypothesise the direct relation between entrepreneurial orientation and the need for achievement, and also its indirect impact on the performance of the company.

- **Need for cognition**

The need for cognition is a need to structure pertinent situations in meaningful, integrated ways and to improve the decision-making process (Sajilan, 2015:40). Cacioppo, Petty, Feinstein and Jarvis (1996:198) argue that individuals with this attribute are more willing to solve complex problems. They search for complete and precise information via perfect cognitive effort. Previous studies show that people with a high demand for cognition have better logical reasoning skills and performance. They are also more effective in information processing and at solving problems.

Levin, Huneke and Jasper (2000:190) explain that the need for cognition has not been extensively examined in the domains of strategic management and entrepreneurship, but evidence shows that managers and entrepreneurs with a higher need for cognition are more successful at adaptive decision-making. Zhang and Bruning (2011:880) argue that individuals with higher levels of a need for cognition behave in certain patterns. It would be reasonable to deduce that entrepreneurs with higher levels of a need for cognition would behave similarly. We would expect that an entrepreneur with a higher level of a need for cognition would place greater emphasis on logical arguments and make their strategic decisions based on extensive market research rather than on intuition.

Farrington, Venter, Schrage and Van der Meer (2012:335) find that several attributes (traits, characteristics and skills) have been identified in the entrepreneurship literature as being associated with entrepreneurial behaviour and entrepreneurial success (Deakins & Freel, 2009; Ramana, Aryasri & Nagayya, 2008; Mahadea, 2001; Entrialgo, Fernandez & Vazquez, 2000). Although as many as 42 different characteristics have

been identified as common among entrepreneurs (Hornaday, 1982), those most commonly cited are the need to achieve, the ability to take risks, tolerance for ambiguity, good locus of control, and creativity and innovation (Chen & Lai, 2010; Deakins & Freel, 2009; Venter, Urban & Rwigema, 2008; Entrialgo *et al.*, 2000).

Farrington *et al.*, (2012:20) identify other attributes which include: the need for autonomy, being a visionary, having self-efficacy (Deakins & Freel, 2009), having effective communication abilities, and being energetic, self-confident and responsible (Kakkonen, 2010). Ndubisi (2008:42) contribute innovativeness, risk-taking propensity, perseverance, and flexibility to the possible list of entrepreneurial traits. In addition, attributes such as being hard-working, money-orientated and optimistic, as well as having commitment, maintaining good interpersonal relations, and being able to build a team (Kumara & Sahasranam, 2009:8), have also been associated with entrepreneurial personalities.

Hood and Young (1993:115) suggest in a study that successful entrepreneurs must develop themselves in four primary areas, namely content, skill, mentality and personality. The first three areas, content, skills and behaviour, and mentality, are referred to as areas of creative knowledge. This is because new knowledge is brought into existence during the creation and subsequent management of growing business entities. Venter, Urban and Rwigema (2008:42) contend that entrepreneurial behaviour is related to experience and prior knowledge of the business and customers. According to Soetanto, Pribadi and Widyadana (2010:24), an abundance of literature exists attempting to define the attributes of successful entrepreneurs.

Raab, Stedham and Neumer (2005:73) insist that the need for achievement, locus of control, propensity to take risks, problem-solving, willingness to assert oneself (willingness to follow through), tolerance of ambiguity, and emotional stability, are the most common and important attributes.

Raab, Stedham and Neumer (2005:73) claim that these attributes distinguish entrepreneurs from others, and that people who possess these attributes may be more likely to start entrepreneurial ventures. Studies show that students with an inclination for entrepreneurship are more innovative, have more incentives for success, have more inner control (internal locus of control) (Brockhaus, 1982), and have a stronger tendency to take risks than students who have no inclination for entrepreneurship (Gurol & Atsan, 2006). Similarly, Ramana, Aryasri and Nagayya, (2008:32) have found that a tolerance for ambiguity and the impact of personal selling on start-up success, have a positive effect on entrepreneurial success. Chen and Lai (2010:4) identify personality traits as key components in venture creation.

Beugelsdijk and Noorderhaven (2005:160) show that entrepreneurial behaviour can be associated with a high need for achievement, a moderate risk-taking propensity, preference for energetic and/or novel activity and the tendency to assume personal responsibility for successes or failure. Brandstatter (1997:162-163) finds that risk-taking, extraversion, social recognition and readiness for change are distinguishing characteristics which entrepreneurs display. In contrast to managers, entrepreneurs want to be free to achieve and to actualise their potential. Teal and Carrol (1999:229) find that an individual who decides to become an entrepreneur is, in a sense, going against the norms of society. These self-employed individuals have rejected the norm of seeking employment with another person or company.

Mueller and Thomas (2000:55) refer to the risk-taking propensity as *innovativeness*, since there appears to be strong evidence that entrepreneurs are more innovative than non-entrepreneurs. In sum, achievement motivation, locus of control and preference for innovation are seen as the classic themes throughout entrepreneurial trait research (Steward, Watson, Carland & Carland, 1998:190).

Morris and Kuratko (2002:24) argue that the prevailing idea that the characteristics of entrepreneurs cannot be taught or learned, that they are innate traits with which one must be born, has a long history. These traits include achievement motivation,

aggressiveness, initiative, drive, a willingness to take risks, tolerance of ambiguity, analytical ability and self-confidence. Today it is recognised that traits and characteristics associated with entrepreneurial behaviour are heavily influenced by environmental conditions (family, work, peer, social) and that each person has significant entrepreneurial potential.

Timmons and Spinelli (2009:47) have identified seven themes of desirable and acquirable attitudes and behaviour which will fit the successful entrepreneur: commitment and determination; courage; leadership; opportunity obsession; tolerance of risk, ambiguity and uncertainty; creativity; self-reliance and adaptability; and motivation to excel.

2.4 INTRAPRENEURSHIP

Many companies across the globe are facing increasingly intense competition, making profitable growth a great challenge in today's economic climate. Mohanty (2006:99) asks the question: "Why do some companies operating under competitive conditions continue to achieve sustained high performance?" He argues that the most successful companies do not try to either beat their domestic rivals in the market or indulge in financial manipulations; instead, they came up with new approaches — 'paradigm breaking,' i.e., to create industry breakpoints — which he calls the logic of value innovation or corporate entrepreneurship.

De Villiers-Scheepers (2011:250) explains that the term 'intrapreneurship' refers to entrepreneurial behaviour within established firms, with proponents such as Pinchot (1985), and Antoncic and Hisrich (2001) promoting and researching the phenomenon. Stevenson and Jarillo's (1990:23) definition of entrepreneurship, as a process whereby individuals pursue opportunities without regard to the resources they control at that point in time, has been the basis of many entrepreneurship studies, due to the definition's simplicity and wide applicability, by focusing on actors, opportunities, resources and alluding to the process involved.

The relentless pressures of competition stemming from globalisation, technological changes, etc., are increasingly buffeting organisations (Seshadri & Tripathy, 2006:17). One of the pathways for companies to weather these storms, are through unleashing the entrepreneurial spirit latent in its employees, enabling these employees to carve out new paths, initiate new ventures, defy the *status quo* in their organisations and break fresh ground. They add that there is an increasing body of knowledge relating to unleashing entrepreneurial energies in large organisations, referred to as 'corporate entrepreneurship' or 'intrapreneurship.' Seshardi and Tripathy (2006:17) show that intrapreneurship is a major driver for organisational renewal or 'reinvention'. Baruah and Ward (2015:1) describe intrapreneurship as the innovation practice within an organisation through which employees undertake new business activities and pursue different opportunities. De Villiers-Scheepers (2011:249) explains that intrapreneurship has become a value-creating competency in firms' competitive repositories, for the formulation and execution of strategy in today's turbulent knowledge-based economy (Antoncic & Hisrich, 2001:521). In current markets, value is no longer created from physical assets, but from intangible assets, such as knowledge, creativity and intrapreneurship (Allee, 2000:28). Scholars have demonstrated empirically the beneficial influence of intrapreneurship for long-term financial performance (Zahra & Bogner, 1999; Zahra, 1993).

Ping, Naiqiu, Jie and Zhengzhong (2010:458) highlight that the essence of intrapreneurship is to obtain innovation in every aspect of a business, which then leads to transforming it into business value. In short, they state that intrapreneurship means carrying out entrepreneurship activities in an existing enterprise. Antoncic and Hisrich (2001:498) describe intrapreneurship as a process, which ". . . goes on inside an existing firm, regardless of its size, and leads not only to new business ventures, but also to other innovative activities and orientations, such as development of new products, services, technologies, administrative techniques, strategies, and competitive postures". However, Baruah and Ward (2015:2) believe intrapreneurship to be more than just a way of increasing the level of innovation and productivity of organisations. Intrapreneurs are people who dream, beyond their mundane domain, of something

unusual (Pinchot, 1985). Mohanty (2006:104) observes that the concept of intrapreneurship has essentially become an approach that can be systematically adopted in an attempt to define specific strategies and action plans that can help in order to incorporate significant employee contributions.

Bosma, Stam and Wennekers (2011:8) describe intrapreneurship as initiatives by employees in organisations, to undertake new business activities. Although intrapreneurship is related to corporate entrepreneurship, these concepts differ in the following sense: Corporate entrepreneurship is usually defined at the level of organisations and refers to a top-down process, i.e. a strategy that management can utilise to foster more initiatives and/or efforts to achieve improvement from their workforce and organisation. Intrapreneurship relates to the individual level and is a bottom-up approach, proactive work-related initiatives of individual employees. Rigtering and Weitzel (2013:338) however explain that in the literature that corporate entrepreneurship is usually studied as a top-down process of creating corporate change, renewal and flexibility through a managerial disposition towards innovative, proactive and risk-taking behaviour (Covin & Slevin 1989; Lumpkin & Dess 1996; Miller 1983; Rauch, Wiklund, Lumpkin & Frese, 2009).

De Villiers-Scheepers (2012:251) explains that the intrapreneurial process has various outcomes, such as new products, services, processes or business developments, which firms use to build or maintain a competitive advantage. The pursuit of an intrapreneurial strategy not only has positive long-term financial performance effects (Erasmus & Scheepers, 2008:236), but can also lead to non-financial benefits, such as improved morale of employees, increased collaboration and a creative working environment (Hayton, 2005:21).

Rigtering and Weitzel (2013:338) distinguish between entrepreneurial activities that are initiated top-down by the organisation (corporate entrepreneurship), and entrepreneurial activities that are pursued bottom-up by employees within an organisation (intrapreneurship). Although a distinction between top-down and bottom-up initiated

entrepreneurial activities is essential in order to acknowledge that there are different conditions for entrepreneurial behaviour at (top) management level and at the employee level (Dess, Ireland, Zahra, Floyd, Janney & Lane, 2003:171), the terms corporate entrepreneurship and intrapreneurship are often used interchangeably. Sharma and Chrisman (1999:19), for instance, see intrapreneurship as a form of corporate entrepreneurship while other authors like Pinchot (1985), explicitly define intrapreneurs as employees who develop ideas and take hands-on responsibility for the development of innovative new projects.

Ireland, Kuratko & Morris (2006:11) hold the view that corporate entrepreneurship is a process used in established firms seeking to use innovation as a means to pursue entrepreneurial opportunities. Corporate entrepreneurship helps a firm to create new businesses through product and process innovations and market developments, and foster the strategic renewal of existing operations. Corporate entrepreneurship can take place on the corporate, business unit, functional, or project levels, with the unifying objective of improving a company's competitive position and financial performance. Gupta (2016:90) explains that many organisations promote intrapreneurship within the company as a way to motivate their employees to come up with new ideas and strategies. These ideas bring innovation into business, which promotes its growth and assures its sustainability in the long run. Rigtering and Weitzel (2013:360) add that increased levels of financial performance are mainly due to strategic renewal within the firm. Several studies have proven that corporate entrepreneurship has increased firms' financial performance, especially in firms that operate in hostile and dynamic/turbulent environments (Covin & Slevin, 1989; Kraus, Rigtering, Hughes & Hosman, 2012; Wiklund & Sheppard, 2005).

Seshardi and Tripathy (2006:17) are determined that intrapreneurship at any level (individual, group or organisational) fundamentally involves taking ownership, i.e. operating with an entrepreneurial mind-set. In the corporate context, since the person leading the reinvention is not an autonomous entrepreneur, he/she is more appropriately referred to as an 'intrapreneur.' It is very unlikely that reinvention at any

level can occur without this basic transformation of perspective; from 'employee' to 'psychological owner' or intrapreneur. Intrapreneuring is not a path chosen by the majority of employees in any profession, since this path involves a lot more from the person, than would be the case for a person operating with an 'employee mind-set.' However, the reason why it is important, is that it is challenging, fulfilling, personally and professionally rewarding and is urgently required by corporations - both big and small - the world over, in order to thrive meaningfully in uncertain times.

Ireland *et al.* (2006:10) explain that leading-edge companies see the effective use of corporate entrepreneurship as a source of competitive advantage and as a path to higher levels of financial and non-financial performance. Corporate entrepreneurship can be a source of competitive advantage at both corporate and business unit levels. At the corporate level, corporate entrepreneurship helps diversified firms determine the mix to include in their portfolio of businesses as well as how to manage those businesses. At the business unit level, corporate entrepreneurship helps individual businesses develop and use one or more competitive advantages as a key means of implementing chosen strategies, such as cost leadership or product differentiation. According to Hornsby, Kuratko and Zahra (2002:269), intrapreneurship focuses on revitalising and strengthening firms' competencies, in order to acquire skills and innovative capabilities, which is why the roles they play in achieving a competitive advantage have gained interest (Long & Vickers-Koch, 1995:18; McGee & Finney, 1997). The study of Day (1994), show that the main source of this advantage lies in the firm's resources, the aptitudes of employees and the capabilities identified in terms of intangible resources.

Rigtering and Weitzel (2013:338) explain that entrepreneurship, within existing businesses, can be present at every level within the business (Kemelgor, 2002:68; Monsen & Boss, 2009:70) while the various manners in which entrepreneurial behaviour is exhibited across organisational levels can be considered as a main driver of the level of corporate entrepreneurship within a firm (Wales, Monsen, & McKelvie, 2011:896; Covin, Green & Slevin, 2006:63). Furthermore, Antoncic and Hisrich (2003:9) hold the view that at the individual, as well as the organisational level, entrepreneurship can be

seen as either an outcome-based behaviour or its intentions, which can be observed in a series of small events, or in one or more larger events, such as new venture formation or breakthrough innovations. Entrepreneurship can be viewed in both absolute terms (for example, new firm vs. no new firm), as well as in relative terms (more entrepreneurial vs. less entrepreneurial). New firm creation is the most obvious manifestation of entrepreneurship.

Antoncic and Hisrich (2003:9) explain that at organisational level, however, new firm formation may also be seen in relative terms. This is due to the fact that some established companies may have more units or firms than other organisations. Entrepreneurship in businesses is a matter of degree. Businesses can be viewed on the intrapreneurship continuum that ranges from less to more entrepreneurial. Pure forms, in absolute terms, such as totally entrepreneurial or totally non-entrepreneurial businesses, are abstracts that help us to understand reality. These do however, not actually exist in the real world.

The view of intrapreneurship as a continuum is evident in Covin and Slevin's (1989:77) distinction between conservative (risk-averse, non-innovative and reactive) firms and entrepreneurial (risk-taking, innovative and proactive) firms. This is also the case in Brazeal and Herbert's (1999:32) organisational entrepreneurship representation that ranges from entrepreneurially-challenged firms with a non-existent commitment to entrepreneurship, to the entrepreneurial firm (with a total commitment to entrepreneurship).

According to Antoncic and Hisrich (2001:497), terms such as intrapreneuring (Pinchot 1985), corporate entrepreneurship (Burgelman, 1983; Vesper, 1984; Guth & Ginsberg 1990; Hornsby, Naffziger, Kuratko & Montagno, 1993, Stopford & Baden-Fuller, 1994), corporate venturing (Vesper, 1990), and internal corporate entrepreneurship (Schollhammer, 1981, 1982; Jones & Butler, 1992), have all been used to describe the phenomenon of intrapreneurship.

Felicio, Rodrigues and Caldeirinha (2012:1719) add that intrapreneurship refers to the process carried out within the firm, regardless of its size, leading to innovative new projects or activities, including the development of new products, services or other aspects (Miller, 1983; Antoncic & Hisrich, 2001). Covin and Miles (1999:50) extend the activities of intrapreneurship to strategic renewal, scope redefinition, organisational rejuvenation and sustained regeneration. Felicio *et al.* (2012:1719) explain that authors tend to be inconsistent in the use of concepts that identify the phenomenon for study (Zahra, 1991), when using the terms corporate entrepreneurship or intrapreneurship (Kuratko, Montagno & Hornsby, 1990; Antoncic & Hisrich, 2001) and entrepreneurial orientation (Miller, 1983; Covin & Slevin, 1989; Lumpkin & Dess, 1996).

Antoncic and Hisrich (2003:9) define intrapreneurship as entrepreneurship within an existing business, referring to emergent behavioural intentions and behaviour of an business that are related to a departure from the customary. Intrapreneurial processes continue inside an existing firm, regardless of its size. Intrapreneurship refers not only to the creation of new business ventures, but also to other innovative activities and orientations, such as the development of new products, services, technologies, administrative techniques, strategies and competitive postures. Its characteristic dimensions are new business venturing, product/service innovation, process innovation, self-renewal, risk-taking, pro-activeness and competitive aggressiveness.

Churchill (1992:586) describes the concept of corporate entrepreneurship as the process of uncovering and developing an opportunity to create value through innovation and seizing that opportunity without regard, to either resources (human or capital) or the location of the entrepreneur – in a new or existing company. Perhaps the broadest definition of intrapreneurship is entrepreneurship within an existing organisation. Birkinshaw (2003:3) also refers to corporate entrepreneurship as the development of new business ideas and opportunities within large and established corporations. Moving to a more unique perspective, Bloodgood, Hornsby, Burkemper and Sarroghi (2015:383) propose a system dynamics perspective to explain how entrepreneurship occurs within organisations. They employ a framework that includes the four main

activities of opportunity, namely recognition, assessment, legitimation, and implementation (Kuratko, Hornsby & Hayton, 2015:250).

Antoncic and Hisrich (2003:9) explain that intrapreneurship has been defined in several ways: as a process by which individuals inside businesses pursue opportunities independent of the resources they currently control (Stevenson & Jarillo, 1990:23); as doing new things and departing from the customary to pursue opportunities (Vesper, 1990); as a spirit of entrepreneurship within the existing business (Hisrich & Peters, 1998); and as creation of new businesses by a business, or as an instigation of renewal and innovation within that business (Sharma & Chrisman, 1999:11). Some researchers use narrower definitions, excluding smaller businesses and focussing on corporations (Schollhammer, 1982; Kuratko, Hornsby, Naffziger & Montagno, 1993). Others limit the term only to new venture formation (Kanter & Richardson, 1991:209).

Scheepers, Hough and Bloom (2008:52) are of the viewpoint that corporate entrepreneurship describes the total process whereby established enterprises act in innovative, risk-taking and proactive ways (Zahra, 1993; Lumpkin, Dess & McGee, 1999; Bouchard, 2001). This behaviour has various outcomes. An outcome may result in a new product, service, process or business development. Corporate entrepreneurship may be chosen as a strategy to bring about increased financial performance. It also leads to other non-financial benefits, such as increased morale or employees, collaboration, and a creative working environment (Hayton, 2005). It may result in “new” businesses being created as “spin-out-ventures” (Hornsby, Naffziger, Kuratko & Montagno, 1993), or it may involve the restructuring and strategic renewal within an existing enterprise (Volberda, Baden-fuller & Van den Bosch, 2001). Corporate entrepreneurship is a multi-dimensional phenomenon. Corporate venturing, intrapreneurship and strategic renewal are therefore different components of corporate entrepreneurship (Covin & Slevin, 1989).

Verbeke, Chrisman and Yuan (2007:587) show that the corporate entrepreneurship literature distinguishes between two primary types of entrepreneurial activities in

established firms: strategic renewal and corporate venturing. Guth and Ginsberg (1990:5) define strategic renewal as the “transformation of organisations through renewal of the key ideas on which they are built.” Sharma and Chrisman (1999:19) help clarify this definition when they suggest that strategic renewal involves “significant changes to an organisation’s business or corporate level strategy or structure”. Covin and Miles (1999:49) further contribute to our understanding when they distinguish between instances where individuals in firms, parts of firms, or entire firms act entrepreneurially. Although these authors all use somewhat different terminology, what we are calling strategic renewal typically involves entrepreneurial action by an entire firm.

Corporate entrepreneurship is quickly becoming the strategy of choice for many large companies, as a powerful antidote to large company staleness, lack of innovation, stagnated top-line growth, and the inertia that often overtakes the large, mature companies of the world (Thornberry, 2003:329).

Thornberry (2003:330) has identified four broad typologies or categories of corporate entrepreneurship in the literature, namely:

(1) **Corporate venturing**, involves the starting of businesses within a business, usually emanating from a core competency or process.

(2) **Intrapreneuring**, first espoused by Pinchot (1985), is an attempt to take the mind-set and behaviour that external entrepreneurs use to create and build businesses, and bring these characteristics to bear inside an existing and usually large corporate setting.

(3) **Organisational transformation**. Thornberry (2003:330) believes that this is the only type of entrepreneurship that fits the original Schumpeterian definition that, if the transformation involves innovation, a new arrangement or combination of resources and results in the creation of sustainable economic value. Besson and Rowe (2012:103) describe organisational transformation as a process that engenders a qualitatively

different organisation. Wang (2010:64) calls it Business Process Reengineering (BPR) and defines BPR as any radical change in the way in which organisations perform their business activities; and

(4) **Industry rule-breaking**, involves not only transformation of the enterprise, but “also the competitive environment of the industry into something significantly different than it was”. Stopford and Baden-Fuller (1993:522) label this behaviour as “*frame-breaking change*”. Olin and Wickenberg (2001:15) explain that the process of industry rule-breaking is a process characterised by organisational politics, since advocates of any innovation need to negotiate and acquire a share of the organisation’s common resources to make room for the development of their innovation. March, Schultz and Zhou (2000:2) philosophically state that written rules are repositories of organisational lessons, but the learning that deposits new lessons into rules and remove old ones, is notorious for generating myopic, path-dependent and inefficient histories.

Birkinshaw (2003:8) explains that in the concept of corporate entrepreneurship, there are at least four schools of thought, and agrees with Thornberry (2003) on *corporate venturing*, *intrapreneurship* and *entrepreneurial transformation*, but adds “bringing the market inside”. This school of thought operates at the firm level, but it focuses more on the structural changes that can be made to encourage entrepreneurial behaviour. It uses the metaphor of the marketplace to suggest how large firms should manage their resource allocation and people management systems.

2.4.1 Business and individual characteristics that foster Corporate Entrepreneurship

2.4.1.1 Business characteristics

Hornsby *et al.* (1993:30) state that the literature illustrates a wide variety of corporate entrepreneurship factors that are consistent throughout the writings in the field. Based on an analysis of the most consistent elements in the literature, Kuratko, Montagno &

Hornsby (1990:49-58) developed a multidimensional scale (The Intrapreneurial Assessment Instrument [IAI]), consisting of five factors that summarise the major sub-dimensions of the concept of intrapreneurship. Each of the dimensions identified by Hornsby *et al.* (1993) is an aspect of the business over which management has some control:

Management support. This is the extent to which management structures itself to encourage employees to believe that innovation is, in fact, part of the role set for all members of the business. Some of the specific conditions reflecting management support would be quick adoption of employee ideas, recognition of people who bring ideas forward, support for small experimental projects and seed money to get projects off the ground. Baruah and Ward (2015:818) explain that if the structure and environment of an business does not provide any encouragement for innovation, the existence of intrapreneurship and nourishment of intrapreneurs is very bleak.

Scheepers (2011:252) explains that several studies have indicated that intrapreneurial activity should be appropriately rewarded, and that one of the prime responsibilities of top-management leaders is to emphasise organisational culture to allow and appreciate failures as a means to encourage intrapreneurs (Rule & Irwin, 1988; Toftoy & Chatterjee, 2004; Mohanty, 2006; Seshadri & Tripathy, 2006; Arslan & Cevher, 2014).

Autonomy/work discretion. Workers are allowed discretion to the extent that they are able to make decisions about performing their own work in the way that they believe is most effective. Businesses should allow employees to make decisions about their work process and avoid criticising employees for making mistakes when being innovative. According to Alpan, Bulut, Gunday, Ulusoy and Kilic (2010:7), studies have indicated that organisational support for an effective intrapreneurial climate should involve autonomy and flexibility, particularly in strategy making (Mintzberg, 1973; Khandwalla, 1973; Burgelman, 1983, 1984; Covin & Slevin, 1989; Barringer & Bluedorn, 1999; Honig, 2001). Work discretion is concerned with the degree of autonomy of the employees to make decisions regarding their work (Covin & Slevin, 1990; Lober, 1998;

Kuratko *et al.*, 1993; Hornsby *et al.*, 2002), and to implement their ideas in order to realise their novel concepts (Lumpkin & Dess 1996, 2001).

Rewards/reinforcement. Rewards and reinforcement enhance the motivation of individuals to engage in innovative behaviour. Businesses must be characterised by providing rewards contingent on performance, providing challenges, increasing responsibility and making ideas of innovative people known to others in the organisational hierarchy. Baruah and Ward (2015:818) warn that a lack of systematic encouragement and empowerment of innovative actions can deteriorate innovation propensity. So, for intrapreneurial firms, Scheepers (2011:252) finds that formal acknowledgment, social incentives and organisational freedom can boost and encourage innovation.

Time availability. The fostering of new and innovative ideas requires that individuals have time to incubate these ideas. Businesses must moderate the workload of people, avoid putting time constraints on all aspects of a person's job and allow people to work with others on long-term problem solving. Alpan *et al.* (2010:6) view time availability as the sufficiency of time to work on developing novel ideas and implementing projects (Brazeal, 1993; Fry, 1987; Pinchot, 1985; Kuratko *et al.*, 1990). Other resources such as information, labour, equipment etc. are the inputs of the research and development activities. According to Van den Ende, Wijnberg, Vogels and Kerstens (2003: 279), most of the enthusiastic intrapreneurs make their pioneering steps to actualise their idealised projects in their spare time.

Organisational boundaries. Hornsby *et al.* (1993:30) explain that these are the boundaries, real and imagined, that prevent people from looking at problems outside their own job. People must be encouraged to look at the business from a broad perspective. Businesses should avoid having standard operating procedures for all major parts of jobs and should reduce dependence on narrow job descriptions and rigid standards of performance.

2.4.1.2 Individual characteristics

While many businesses do not objectively assess the personality characteristics of either potential or current employees, it is important to recognise the influence of individual differences on innovative behaviour. Based upon existing literature on entrepreneurship, a set of commonly cited individual traits of characteristics was selected by Hornsby *et al.* (1993:33). This set is not meant to be exhaustive; it is an operational group of characteristics, proposed for the Interactive Model of Corporate Entrepreneurship (refer to page 60). These individual entrepreneurial characteristics include:

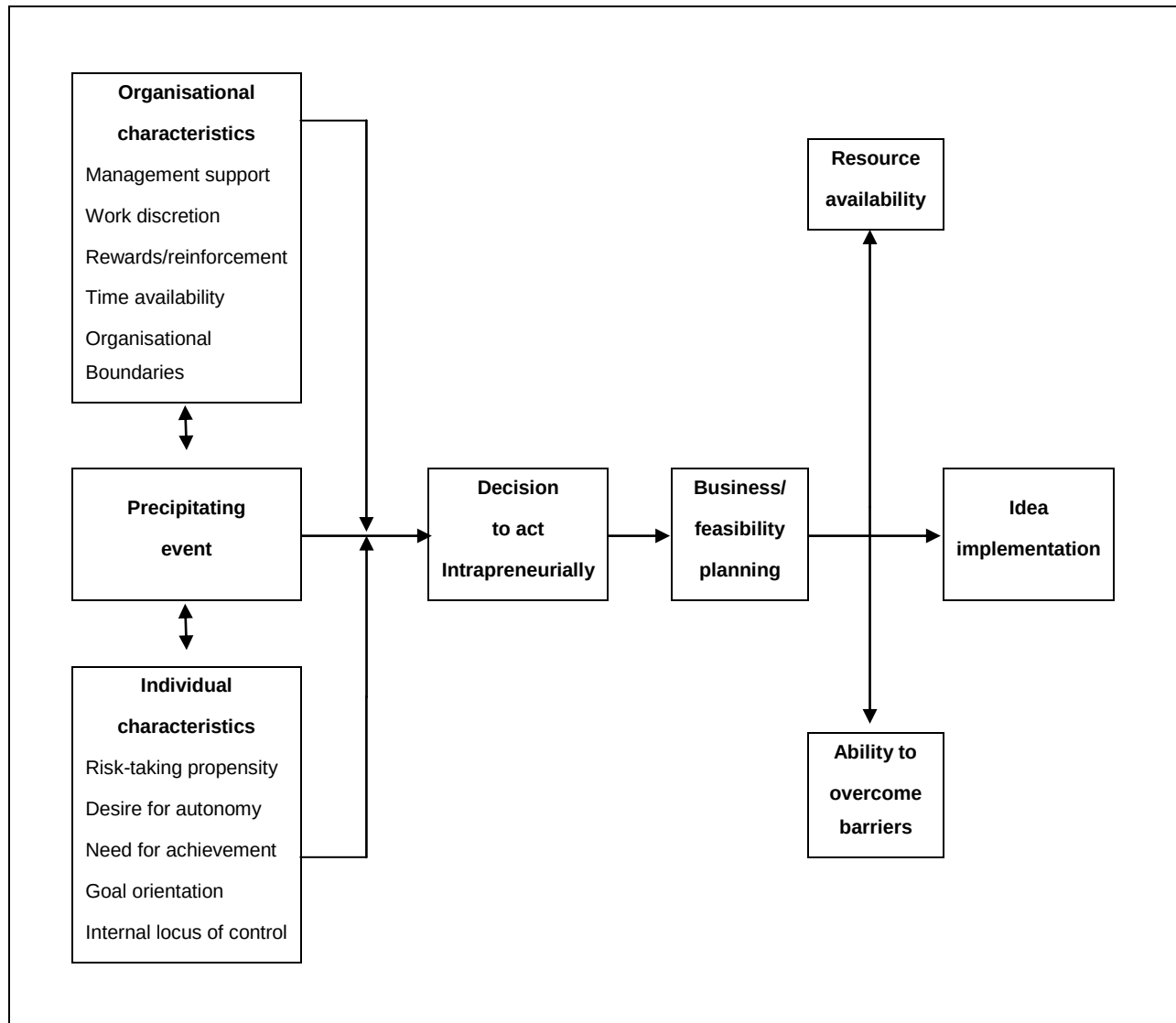
- Risk-taking propensity
- Desire for autonomy
- Need for achievement
- Goal orientation, and
- Internal locus of control.

According to Bosma, Stam and Wennekers (2011:8), major activities related to intrapreneurship include opportunity perception, idea generation, designing a new product or another recombination of resources, internal coalition building, persuading management, resource acquisition, planning, and organising. Key behavioural aspects of intrapreneurship are personal initiative, active information search, out of the box thinking, voicing, championing, taking charge, finding a way, and some degree of risk-taking (Kanter, 1988).

When examining the intrapreneur, Seshadri and Tripathy (2006:26) find that a common thread running through literature is that the intrapreneur demonstrates a strong sense of psychological ownership that is well beyond the call of duty. The intrapreneur also has a

long-term vision, a clear sense of their own life's purpose and a lucid understanding of the role they must play in their businesses.

Figure 2.1: Interactive Model of Entrepreneuring



Source: Hornsby *et al.* (1993:31)

Hornsby *et al.* (1993:33) explain that the decision to act entrepreneurially occurs as a result of an interaction between organisational characteristics, individual characteristics and some kind of precipitating event. The precipitating event provides the impetus to

behave entrepreneurially when other conditions are conducive to such behaviour. Greenberger and Sexton (1998:6) claim that a “salience of events” needs to exist in order for an individual to decide to initiate a new venture. Zahra (1991:259-285) identifies a number of influencing factors in corporate entrepreneurship that can be viewed as types of precipitating events. These include environmental factors, such as hostility (threats to a firm’s mission through rivalry), dynamism (instability of the firm’s market because of changes) and heterogeneity (developments in the market that create new demands for a firm’s product). In addition, organisational factors, such as structure and managerial values, are cited. Zahra’s influencing factors seem to include a common theme, also suggested by Greenberger and Sexton (1988:3). Some type of *environmental or organisational change* precipitates or ignites the interaction of organisational and individual characteristics, to cause intrapreneurial events. Zahra (1991:259-285) shows that some specific examples of precipitating events in the corporate entrepreneurship process could include: development of new procedures; a change in company management; a merger or acquisition; a competitor’s move to increase market share; development of new technologies; cost reduction; change in consumer demand and economic changes.

2.5 DIMENSIONS OF ENTREPRENEURIAL ORIENTATION

Entrepreneurial orientation has its roots in the strategy-making process literature and represents the policies and practices that provide the basis for entrepreneurial decisions and actions (Rauch *et al.*, 2009:763). Based on Miller’s (1983:770) conceptualisation that an entrepreneurial business is one that engages in product market innovation, undertakes somewhat risky ventures and is first to come up with pro-active innovations, three dimensions of entrepreneurial orientation were identified, namely: *innovativeness*, *risk-taking* and *pro-activeness*. Covin and Slevin (1989:76) further refine Miller’s definition by stating that the entrepreneurial orientation of a business is demonstrated by the extent to which the top managers are inclined to take business-related risks (risk-taking dimension), to favour change and innovation in order to obtain a competitive advantage for their businesses (innovative dimension), and to compete aggressively

with other businesses (pro-active dimension). While a number of authors have adopted similar definitions, for example: Zahra, Jennings and Kuratko (1999:50), and Morris, Kuratko and Covin (2008:54), many others have made subtle changes that altered the meaning of the construct (George & Marino, 2011:992). Dess and Lumpkin (2005:147) for example, define entrepreneurial orientation as the strategy-making practices that businesses use to identify and launch corporate ventures. This definition is clearly limited to decisions related to the launch of new ventures. A business may therefore, have a high entrepreneurial orientation based on the Covin and Slevin (1989:77) definition, but not necessarily on the Dess and Lumpkin (2005:147) definition.

George and Marino (2011:992) show that several authors have defined the domain of entrepreneurial orientation as containing fewer or more dimensions (George & Marino, 2011:992). Two other dimensions were added by Lumpkin and Dess (1996:139-140), namely, *Competitive aggressiveness* and *Autonomy*. These authors argue that entrepreneurial orientation includes a propensity to act autonomously and a tendency to be aggressive towards competitors. Wang (2008:637) on the other hand, adopted four dimensions namely, pro-activeness, competitive aggressiveness, risk-taking and innovativeness.

Covin and Lumpkin (2011:885) explain that the entrepreneurial orientation construct has been widely debated, but there is unfortunately no consensus on matters such as an appropriate definition of the construct, its domain or its dimensionality (Covin & Lumpkin, 2011:856; George & Marino, 2011:992). *For the purpose of this study*, the notion that entrepreneurial orientation refers to a business' strategic orientation, is adopted – one that captures the specific entrepreneurial aspects of decision-making styles, methods and practices. Further, the entrepreneurial orientation construct is viewed as consisting of five independent dimensions namely: innovativeness, autonomy, risk-taking, pro-activeness and competitive aggressiveness.

The five dimensions measuring an entrepreneurial orientation are discussed in this section, with reference to the education sector.

2.5.1 Innovativeness

Park, Kim and Krishna (2014:532) show that business leaders and managers are regularly searching for ways to make their businesses more innovative, competitive, and successful. Businesses which develop formal and informal structures, systems and procedures, and human resources, all aimed at achieving such strategic goals and missions, including innovation, are known as *effective* businesses. Drejer (2006:143) explains that there is a growing acknowledgement that innovation is the only source of growth, competitive advantage and new wealth. Wiklund and Shepherd (2003:1309) find that innovative businesses can perform exceptionally well, and may be described as the engine of economic growth.

According to Tajeddini (2010:222), innovativeness is conceived as one of the avenues for gaining a competitive advantage (Hult, Snow & Kandemir, 2003:420; Tajeddini, Trueman & Larsen, 2006:529). Innovativeness has often been shown as one of the most important strategic orientations for firms to achieve long-term success (Noble, Sinha & Kumar, 2002:30) and it has a significant effect on venture performance (Rauch & Frese, 2000; Utsch & Rauch, 2000). The importance of innovation to entrepreneurship was first emphasised by Lumpkin and Dess (1996:141), who proposed that innovation is the single dimension that has to be employed by all entrepreneurial businesses.

Roehrich (2004:671) argues that there is no real consensus on the meaning of innovativeness. It may be described as the early purchase of a new product, as well as a tendency to be attracted by new products (Steenkamp, Hofstede & Wedel, 1999:65). It is a multi-dimensional composite variable composed of radical ideas, relative advantages, and the number of innovations adopted (Nystrom, Ramamurthy & Wilson, 2002:221). Following a distinction made by Hult *et al.* (2003:404), they suggest that the first construct of innovation (the initiation process) into the models of market orientation, is innovativeness, which is the notion of openness to new ideas as an aspect of a firm's culture (values and beliefs) toward innovation. McFadzean, O'Loughlin and Shaw

(2005:353) agree that *innovativeness* reflects a business' tendency to engage in and support new ideas, novelty, experimentation and creative processes that may result in new products, services or processes.

Roehrich (2004:671) describes innovativeness as the "creation of newness" and Draft (2012) defines it as the "adoption of an idea of behaviour that is new to the organisation" or depicts a firm's ability to develop, launch and commercialise new products or services at a fast rate and ahead of his competitors. Cooper (1998:499) explains that product/service innovation presents any change in the product or service range that a business takes to market, and has proved to be potentially significant sources of strategic advantage. Pedersen and Johansen (2012:2) warn that ineffective senior management teams, poor vertical communication and unclear strategies, are "the silent killers of organisational change" (Beer & Eisenstat, 2000:29).

Covin and Miller (2014:15) describe innovativeness as a component of both the composite and multidimensional conceptualisations of the entrepreneurial orientation construct. Innovativeness is appropriately conceptualised as the *ability* to produce innovations. The strength of this ability is typically assessed through the existence of particular innovation process outcomes, such as new product introductions. Gürbüz and Aykol (2009:323) state that even in the presence of the other dimensions, if innovation is not employed, there is no business-level entrepreneurship.

Yemini, Addi-Racah and Katarivas (2015:529) explain that corporate entrepreneurship has been labelled 'intrapreneurship' (Antoncic & Hisrich, 2001:495), and typically has been investigated through the lens of big businesses in a fluctuating, competitive environment. Austin, Stevenson and Wei-Skillern (2006:2) add that in the school setting, in contrast, leadership innovation takes on an aspect of social entrepreneurship that encompasses innovative activities with a social objective in both for-profit and non-profit businesses. They define social entrepreneurship as innovative, social, value-creating activities that can occur within or across the non-profit, business, or government sectors.

Yemini *et al.* (2006:529) explain that in education, innovations can be related to school practices, standards and policies (Pacheco, York & Dean, 2010:1003). Innovation can manifest in various areas, such as *pedagogy*, which is, curricular content and instructional strategies with immediate impact at the classroom level; *organisation*, which is, practices and structural designs that do not directly affect classroom techniques or content (Lubienski, 2003:405); and *social concerns*, which involve creating arrangements to solve social problems by pursuing opportunities to catalyse social change and/or address social needs in innovative ways and combinations of resources (Mair & Marti, 2006:3).

2.5.2 Autonomy

Alpkan *et al.* (2010:5), after exploring the studies of Kuratko *et al.* (1990), Kuratko *et al.* (1993), Hornsby *et al.* (1993), Hornsby *et al.* (1999), Hornsby *et al.* (2002), Kuratko *et al.* (2004), and Kuratko *et al.* (2005), find that a suitable organisational milieu for intrapreneurial activities to flourish, necessitates a set of organisational policies, processes, and characteristics whereby organisations try to actualise their appropriate managerial practices and required behavioural patterns for pioneering innovative ideas in their products, operational and managerial processes, structures and markets. The literature on how to establish a suitable internal environment for intrapreneurship seems to be based on several organisational arrangements or managerial tools, namely (1) management support for generating and developing new business ideas, (2) allocation of free time, (3) convenient organisational structures concerning, in particular, a decentralisation level or decision-making autonomy, (4) appropriate use of incentives and rewards, and (5) tolerance for trial-and-errors or failures in cases of creative undertakings or risky project implementations.

Lumpkin, Cogliser and Schneider (2009:47) explain that the independent spirit and freedom of action necessary to advance new venture development, is a driving force of entrepreneurial value creation (Burgelman, 2001). Lumpkin and Dess (1996:140) add that for entrepreneurship to thrive in many organisational contexts, “the exercise of

autonomy by strong leaders, unfettered teams, or creative individuals who are disengaged from organisational constraints” is required. Autonomy affords organisational members the freedom and flexibility to develop and enact entrepreneurial initiatives.

Autonomy is essential to the processes of leveraging a business’ existing strengths, identifying opportunities that are beyond the business’ current capabilities, and encouraging the development of new ventures and/or improved business practices (Lumpkin *et al.*, 2009:49). Antoncic and Hisrich (2003:8) add that numerous scholars argue that autonomy is required for entrepreneurial initiatives to emerge and thrive, and constitutes a basic feature of entrepreneurially oriented businesses.

According to Brock (2003:58), prior research supports the view that, within businesses, autonomy encourages innovation, promotes the launching of entrepreneurial ventures, and increases the competitiveness and effectiveness of firms. Autonomy constitutes one of the bases for innovative and entrepreneurial behaviour (Casillas & Moreno, 2010:270), therefore businesses that rely on an entrepreneurial orientation to create new value and growth, must encourage entrepreneurial behaviour by allowing employees to act and think more independently (Gürbüz & Aykol, 2009:324). Covin, Green and Slevin (2006:60) warn that firms that are overly dependent on participation in decision-making and require consensus to be reached before launching entrepreneurial initiatives, may suffer financially.

Lumpkin *et al.* (2009:49) state that in an organisational context both “top-down” and “bottom-up” approaches may be useful for encouraging autonomy (Quinn & Spreitzer, 1997:38). Companies with an overall entrepreneurial mission use a top-down approach to stimulate entrepreneurial activity (Birkinshaw, 1997:226). Top managers support programs and incentives that foster a climate of entrepreneurship and welcome autonomous decision-making. These companies are well-known for supporting the type of independent thinking and action that is characteristic of autonomy.

Lumpkin *et al.* (2009:49) asserts that many of the best ideas for entrepreneurial ventures, however, come from the bottom-up. To encourage autonomous decision-making at the grass-roots levels of such businesses, special incentives and structural arrangements, designed to develop and build support for entrepreneurial ventures, may be required.

School change or innovation have become buzzwords for all schools, especially due to the fact that they must strive to be structurally effective and adaptive to rapidly changing educational environments (Park, 2012:89). Yemini *et al.* (2015:526) explain that in many countries schools are exposed to increasing pressure to perform well, along with demands to adhere to governmental standards and policies. At the same time, because of decentralisation processes, schools are allowed more power and autonomy. These two prominent trends expose school leaders to contradictory forces that affect their actions and practices. On the one hand, principals face being accountable for school outcomes, in line with prescribed regulations and standards; while on the other hand, following decentralisation, school principals have the opportunity to extend their spheres of autonomy.

In contrast, Chang, Leach and Anderman (2015:316) stress that recent accountability measures have taken a toll on principals' autonomy. Connelly (2009:64) argues that the new age of increased educational accountability policies encroach on principals' autonomy, thus rendering them less effective in governing their schools. Principals often face conflict between their need to be autonomous, to meet the specific needs of their schools, and the requirements to comply with top-down mandates and accountability policies. Goodwin, Cunningham and Childress (2003:28) identify this autonomy conflict as one of the major tensions that contemporary principals have to face, suggesting that these conflicts will affect principals' job-related motivation. They describe an autonomy conflict as conflict between being responsive to mandates and being autonomous.

Yemini *et al.* (2015:526) explain that schools are influenced both by top-down accountability demands and by the autonomous action of principals from the bottom-up.

To some extent, school principals enjoy discretion over their actions, as long as they advance and improve student achievements. These trends enable school principals to take advantage of the opportunities within their school environments to mobilise resources, promote new initiatives and lead change in their schools and communities.

Schmerler (2002:370) notices that many educators and policy-makers have realised that, in order to do their best work, schools need the luxury of freedom. Just as autonomous cultures in the business world have improved employee morale, increased innovation, and encouraged a more nimble, customer-focused workforce; greater autonomy can also free educators to try new approaches within instruction, staffing, and schedules, so that they can respond quickly and more effectively to student needs. Experience with autonomous schools has shown that granting schools more flexibility can yield more innovation in school management, staffing, and instruction, bringing high-performance schools to communities that greatly need them.

Connely (2009:64) stresses that schools thrive under good principal leadership and principals welcome the challenge of making sure that each child, regardless of their subgroup status, learns at high levels. Granting principals full authority, autonomy, and responsibility for the schools they lead is one sure path that will lead to increased student achievement.

2.5.3 Risk-taking

Morgan, Orzen, Sefton and Sisak (2015:1) maintain that entrepreneurship is widely viewed as a fundamental driver of economic growth. Many countries subsidise entrepreneurship, especially small-scale entrepreneurship. An important determinant of entrepreneurial activity and performance are risks of various forms. Much of the literature on entrepreneurship focuses on identifying characteristics and personality traits of would-be entrepreneurs. Wu and Knott (2006:1315) point out that, while entrepreneurs are conventionally risk-averse in responding to demand uncertainty, they are risk-seeking (overconfident) about risks related to their own ability.

Lumpkin and Dess (2001:431) describe risk-taking as a tendency to take bold actions such as venturing into unknown new markets, committing a large portion of resources to ventures with uncertain outcomes, and/or borrowing heavily. Altinay, Madanoglu, Daniele and Lashley (2012:491) determine that the risk-taking propensity is an important element of entrepreneurship and refers to the propensity of an individual to exhibit risk-taking or risk-avoidance behaviour, when confronted with situations which might involve an element of risk. Brockhaus (1980:513) gives a more detailed definition of risk-taking propensity by saying that "the propensity for risk-taking is defined as the perceived probability of receiving the rewards associated with success of a proposed situation, which is required by an individual before he will subject himself to the consequences associated with failure, the alternative situation providing less reward as well as less severe consequences than the proposed situation".

Lumpkin and Dess (1996:144) find that the early entrepreneurship literature equated the idea of entrepreneurship with working for oneself (i.e., seeking self-employment rather than working for someone else for wages) (Cantillon, 1734). Wu and Knott (2006:1316) explain that a fairly well-established theme in the entrepreneurial literature is that a key economic role of entrepreneurs is risk-bearing. This view dates back to Cantillon (1755) who characterised the economy as consisting of two classes of inhabitants (aside from the prince and landowners): "hired people" on fixed wages and "undertakers" who purchase inputs (including labour) at fixed prices without assurance of profits. The key distinguishing feature of the second class is that it undertakes the risk of demand and price uncertainty (which at the time of his writing must have been quite high because one of the factors Cantillon considered was the number of deaths of local inhabitants). Included in the undertaker (entrepreneur) class were farmers, merchants, shopkeepers, and master crafts men (even robbers). Lumpkin and Dess (1996:144) stress that the concept of risk-taking is a quality that is frequently used to describe entrepreneurship. Palich and Bagby (1995:426) agree that although theorists disagree over exact definitions, entrepreneurs are widely considered to be attracted to risky ventures that promise above-average profit and growth.

Caliendo, Fossen and Kritikos (2010:2) explain that entrepreneurs are “highly tolerant of risk”. Caliendo, Fossen and Kritikos (2009:153) concur that previous research supports this judgment insofar as positive correlations between risk-tolerance and the decision to become an entrepreneur are observed. It is also true that entrepreneurs are less risk-averse than other persons, such as those who are regularly employed (Hartog, Ferrer-i- Carbonell & Jonker, 2002:3). However, Chell, Harworth and Brearley (1991) make it clear that for entrepreneurial success, it might be wise not to maximise the riskiness of investments. In line with that suggestion Caliendo, Fossen, and Kritikos (2010:13) find empirical evidence that there is no linear relationship between risk tolerance and entrepreneurial success. Their analysis confirms the hypothesis that persons with particularly low or particularly high risk attitudes survive as entrepreneurs less often than those with a medium-level risk attitude.

Wu and Knott (2006:1316) indicate that entrepreneurs bear greater risk than wage-earners. Firstly, they bear income risk in that the stream of income from new ventures is uncertain. In the worst case, the firm fails and the income stream ceases. This risk of failure is considerable. Given that entrepreneurs perform a risk-bearing role, most theoretical literature has assumed that entrepreneurs have greater risk-tolerance than wage-earners (McClelland 1961, Lucas 1978, Kanbur 1979, Kihlstrom and Laffont 1979). Empirical literature has emerged to test this inference. Miner and Raju (2004:11) add that the surprising result has been that entrepreneurs do not appear to differ from wage-earners on this trait. In fact, where there are differences they tend to indicate that entrepreneurs exhibit greater risk-aversion than wage-earners.

Altinay *et al.* (2012:491) find that there is no consensus in the literature about the extent of risk-taking in the entrepreneurship process. Thomas and Mueller (2000:291) explain that some studies found that entrepreneurs are moderate risk-takers, taking calculated risks to avoid uncertain situations. When comparing the risk-taking propensity of managers versus entrepreneurs, there seems to be little consensus in the literature, with some studies suggesting that entrepreneurs seem to be involved in riskier ventures and entrepreneurial processes (Busenitz, 1999:327), whilst others have not found any

substantial differences between entrepreneurs (defined as firm-owners) and managers or even the general population (Low & MacMillan, 1988; Kogan & Wallach, 1964). One of the explanations put forward by some authors (Janney & Dess, 2006:386) to justify such variances in the findings, is that entrepreneurs may perceive the risk context differently to other segments of the population. In such cases an action which might appear risky for an established company might not be in an entrepreneurial context. Therefore an entrepreneur who takes on such risk may appear to be willing to take on a greater risk than an established company, even though the entrepreneur does not perceive this as a great risk. Indeed, existing risk measurements might fail to capture the actual risk contexts that entrepreneurs face.

Morris *et al.* (2008:62) highlights that risk does not refer to extreme or uncontrollable risk, but rather to moderate and calculated risk. Lambing and Kuehl (2007:19) explain that corporate entrepreneurs are therefore not high risk-takers. Instead, they try to define the risk they have to take, minimise it as much as possible and manage it (Timmons & Spinelli, 2009:52). McBeth and Rimal (2004:18) add that these enterprises should rather be viewed as risk-aware and opportunity-focused businesses.

Howard and Mozejko (2015:5) notice that change is generally considered to be the act of becoming something different. Educational change is commonly used to describe *educational reform*, which is the goal of changing public education in some way. Educational change happens at a variety of levels: student, teacher, school, local community, state and nation (Fullan, 2007).

Baylor and Richie (2002:400) explain that over the past few decades there have been continuous efforts to 'fix' teaching and learning. There is significant focus on literacy, numeracy, and improving performance of disadvantaged students, to name just a few. To change, it is necessary to take risks. Some individuals will find change less risky, while others perceive higher risks for the same situations. Studies have found that teachers with an 'openness' of mind are more likely to experiment. Risk-taking is closely tied to external factors such as professional development and a supportive climate.

Yemini *et al.* (2015:536) are of the viewpoint that institutional entrepreneurship is not about an extremely proactive change, but rather involves profound change of the organisational settings and norms. Howard and Mozejko (2015:5) describe risk-taking as something that schools can encouraged through fostering experimentation and a culture of change. A culture of change means that teachers can work towards change and feel that they are able to experiment with new tools, approaches and teaching strategies without punishment or fears of negative impact on students' learning.

According to Yemini *et al.* (2015:536), the mind-set of an entrepreneur is to think above and beyond normal ideas and expectations. Having the ability to become a risk-taker, "involves taking a chance or embarking on a venture even though there is no certainty of a positive or intended result". In this regard, Mullins and Forlani (2005:51) warn that risk is either the potential to act too quickly on an unsubstantiated opportunity, or the potential to wait too long before acting.

Xaba and Malindi (2010:77) warn that failure is always a reality when being an innovative risk-taker, but when an entrepreneur experiences success, none of the risk-taking moments and stresses is of any importance any more. When executing visions that they have committed to, risk-taking leaders are not held up by funding restrictions. Leaders that are able to become risk-takers are pro-active in trying new things or creating change where it is needed.

2.5.4 Pro-activeness

De Massis, Chirico, Kotlar and Naldi (2013:2) show that the studies of many scholars find that pro-activeness is a forward-looking perspective, characterised by pursuing and anticipation of future wants and needs in the marketplace (Lumpkin & Dess, 2001:949; Eggers, Kraus, Hughes, Laraway & Snyckerski, 2013:528). Thus, pro-active firms capitalise on emerging opportunities and beat competitors by shaping the environment (Eggers *et al.*, 2013:2). Indeed, prior research on firm pro-activeness has centred on the organisational pursuit of favourable business opportunities. As suggested by

Venkatraman (1989:949), pro-active firms aim at anticipating and acting on future needs by “seeking new opportunities which may or may not be related to the present line of operations, introduction of new products and brands ahead of competition, strategically eliminating operations which are in the mature or declining stages of life cycle”. Gürbüz and Aykol (2009:323) are clear that a proactive business is a leader rather than a follower, since it has the will and the foresight to seize new opportunities, even if it is not always the first to do so.

Eggers *et al.* (2013:528) are of the viewpoint that a firm can create a competitive advantage by anticipating future demand changes (Lumpkin & Dess, 1996:146), or even by shaping the environment. This means that by not merely passively observing environmental pressures, firms can influence their own surroundings (Buss, 1987). As Miller (1983:771) states, a pro-active company is one that “is first to come up with ‘pro-active’ innovations”. Pro-activeness thereby includes the tendency to be the first to market with new products or services. A pro-active company is often the initiator of actions or events that the competition must then react to, leading the way in products and services. Taking the initiative through participating in up-and-coming markets, for example, plays a critical role in entrepreneurship (Lumpkin & Dess, 1996:146), making pro-activeness a central dimension of entrepreneurial orientation.

Pihie, Asimiran and Bagheri (2014:3) describe pro-activeness as being active in creating and leading toward the future, rather than passively waiting to be affected by it. By being proactive, entrepreneurial leaders not only explore new opportunities for entrepreneurial activities, but also step into action and exploit opportunities to improve the business’ performance (Kuratko, Hornsby & Goldsby, 2007; Kuratko & Hornsby, 1999). Zampetakis (2008:155) stresses that pro-activeness highly influences entrepreneurial leaders' creativity, opportunity recognition ability, desire and intention to initiate entrepreneurial activities, and perseverance in achieving their visions.

Pihie *et al.* (2014:3) notice that previous studies on the innovations implemented in schools have provided empirical evidence that these cannot fundamentally change and

improve school performance (Park, 2012:90; Eyal & Inbar, 2003:230). This can be partially attributed to school leadership that failed to provide a supportive environment for change and innovation in the schools (Park, 2012:90). In a recent study, Xaba and Malindi (2010:76) specify the entrepreneurial characteristics of principals in historically disadvantaged schools. The researchers concluded that principals in such schools unconsciously practise innovativeness, pro-activeness and risk-taking in order to overcome the constraints in the school environment, particularly in relation to the required resources. More recently, Park (2012:90) found a significant relationship between principals' leadership style and support for innovation at schools. Eyal and Inbar (2003:230) examined the relationship between primary school principals' pro-activeness and school innovativeness. They define school principals' pro-activeness as "the willingness to start intrinsically motivated actions, which are not imposed by the authorities" and school innovativeness as "the perceived amount of innovations implemented in school during a given time".

Eyal and Inbar (2003:234) explain that schools dominated by the initiating entrepreneurial profile, typically exhibit the generation of a multitude of ideas at the onset and a relatively limited implementation of new initiatives. Nevertheless, their modus operandi can be classed as proactive in its nature, since their principals promote a trial and error culture, although with limited institutionalisation of irregular practices such as multi-disciplinary teaching, alternative evaluation methods or exceptional use of resources. Opposed to this, the vigorous entrepreneurial profile represents a radical entrepreneurial strategy, which is proactive in its nature, and includes discontinuous change events, frame breaking, and a discarding of conventional operating practices (Brazeal & Herbert, 1999; Stringer, 2000:70). This strategy represents a dramatic departure from the current organisational strategy, and is autonomous from the system's authorities. It goes against the current organisational structure, operating like it does not exist, and acts free of existing constraints of the environment. Most of these principals' initiatives lead to action.

Pihie *et al.* (2014:3) describe envisioning of the future and the creation of a scenario of innovative possibilities as the biggest challenges of an entrepreneurial leader. To face these challenges, leaders need to be proactive and anticipate future possibilities, create and develop various entrepreneurial opportunities and take the necessary risks to enact the vision.

2.5.5 Competitive aggressiveness

Lumpkin and Dess (1996:149) describe competitive aggressiveness as a firm's propensity to directly and intensely challenge its competitors to achieve market entry or improve position, in order to outperform industry rivals in the marketplace. According to Lumpkin and Dess (2001:433), this is characterised by a strong offensive posture, directed at overcoming competitors and may also be quite reactive when a firm defends its market position or aggressively enters a market that a rival has identified. Competitive aggressiveness also reflects a willingness to be unconventional rather than rely on traditional methods of competing. Thus, competitive aggressiveness, which refers to a firm's responsiveness directed toward achieving a competitive advantage, is an important component of entrepreneurial orientation (Lumpkin & Dess, 1996:149).

Dess and Lumpkin (2005:151) describe competitive aggressiveness as an intense effort to outperform industry rivals. It is characterised by a combative posture or an aggressive response, aimed at improving position or overcoming a threat in a competitive marketplace. Strategic managers can use competitive aggressiveness to combat industry trends that threaten their survival or market position. Sometimes firms need to be forceful in defending the competitive position that has made them an industry leader. Firms often need to be aggressive to ensure their advantage by capitalising on new technologies or serving new market needs.

Short, Payne, Brigham, Lumpkin and Broberg (2009:12) find that competitive aggressiveness has been recognised as a key ingredient of business success, ever

since military science books such as Sun Tzu's *The Art of War* highlighted its contribution to the understanding of effective strategising.

Smith, Ferrier and Grimm (2001:60) assert that competitive aggressiveness includes the processes that companies engage in to devise and enact strategies aimed at defending their market position or combating industry trends that threaten their survival. A competitively aggressive posture is important for firms that seek to enter new markets and/or excel in the face of intense rivalry (Chen & Hambrick, 1995:456). Wang (2008:6) concur that entrepreneurial firms pursue proactive action in the markets and aggressive gestures toward competitors. Therefore, entrepreneurial firms engage in proactive and extensive environmental scanning.

Lee and Sukoco (2007:550) find that businesses that are competitively aggressive are characterised by responsiveness, which may take the form of head-to-head confrontation; for example, when a business enters a market that another competitor has identified.

There is an important distinction between *competitive aggressiveness* and *pro-activeness* that needs to be clarified (Lumpkin & Dess, 1996:147). *Pro-activeness* refers to how a business relates to market opportunities by seizing initiative and acting opportunistically in order to shape the environment; that is, to influence trends and perhaps even create demand. In contrast, *competitive aggressiveness* refers to how businesses relate to competitors; that is, how businesses respond to trends and demands that already exist in the marketplace.

Eyal and Inbar (2003:222) are of the opinion that schools are state-appointed suppliers of a service funded by the government, and are considered to be domesticated organisations. Therefore, their survival is seldom held in doubt (Drucker, 1985). On the other hand, schools are operating in an environment of increasing uncertainty. This uncertainty does not stem from *competition*, but rather from their openness and consequent exposure to rapid environmental changes (Drucker, 1985). According to

Eyal and Inbar (2003:222), the fast pace of environmental changes and the limited capacity to predict them, together with the multiple factors operating in the schools' environments and their dependence on external resources, all serve to increase the uncertainty under which schools operate. Even though their survival is generally ensured and schools are not measured by standards of financial profit, in situations of stagnation they might face losing their relevance to the society they serve. It would appear that the need for new initiatives, flexibility and self-renewal are basic prerequisites in preventing the creation of gaps between the societal-environmental demands and the function of the schools.

Lubienski (2003:395) explains that few ideas are more closely associated with schools than the notion of innovation. Much of the thinking regarding school choice stems from the premise that state-administered schools are necessarily bound by bureaucratic regulations, inhibiting innovation, and enforcing uniformity in the way that children are educated. Many reformers argue against such a "one-size-fits-all" model for education and believe that market-style mechanisms of consumer choice and *competition* between autonomous schools will encourage diverse and innovative approaches for increasing achievement (Bennet, Fair, Finn, Flake, Hirsch, Marshall & Ravitch, 1998:26). Efforts to free schools from burdensome bureaucratic regulations are intended to undercut the monopolistic political control of public education, giving educators in charter schools the opportunity and motivation to experiment with new instructional strategies (Allen, 2001).

Sirer, Maroulis, Guimera, Wilensky and Amaral (2015:358) notice that the idea of providing parents and students with more choices in schooling options, will improve educational outcomes, has been a leading theme in education reform. Proponents claim that increased choice provides the incentives necessary for schools to become more efficient in converting resources into outcomes (Chubb & Moe, 1990:1085). From the perspective of supporters, choice will not only help those who exercise it, but also provide competition that will lead to system-wide improvements—the proverbial “rising tide that lifts all boats” (Hoxby, 2003). According to Burns (2011:4), proponents of

school competition argue that increased choice for parents forces schools to work harder to be effective and, therefore, competitive in the education 'market'. When treated as private market goods, school competition might be an aspect in determining school performance.

Sirer *et al.* (2015:361) explain that choice programs can lead to academic performance improvement through two broad mechanisms. One mechanism involves students sorting themselves into "better" schools. The schools can be better either in an absolute sense, such as having higher value-added for all students; or in a relative sense, in that students select schools that are better matches for their learning styles or particular needs (Angrist, Dynarski, Kane, Pathak & Walters, 2012:18; Bloom & Unterman, 2014:3015-3016). A second, and potentially farther reaching mechanism, involves a competitive process: when given a choice that is not dependent on residence, students will flow from low-performing schools to better ones. Schools losing students feel pressure to change in order to attract and keep students, which, in turn, creates pressure for all schools to change. In this way, the flow of students to better performing schools initiates a cycle of competition that can lead to system-wide improvements (Hoxby, 2003).

Torres (2015:22) detects that the creation of school choice programs could force principals to become competitive with one another. Research within both charter and traditional public schools has also shown that schools that foster a sense of competition and innovation among the administrators create entrepreneurial characteristics that are imitated by the students within their own personal lives (Sobel & King, 2008:430). The goal of utilising entrepreneurial characteristics within a school setting is to create systematic changes that will result in advancing student achievement.

2.6 SUMMARY

The main purpose of this chapter was to discuss the findings from the literature review on entrepreneurship and corporate entrepreneurship, including various definitions,

characteristics, types and dimensions. According to Bhardwaj, Sushil and Momaya (2007:47), corporate entrepreneurship is becoming increasingly important for the competitiveness of businesses, as they face dynamic competition unleashed by globalisation.

The definition of intrapreneurship or corporate entrepreneurship of internal venturing generally includes salaried innovators who display entrepreneurial actions within an existing business. Entrepreneurial actions are any newly fashioned behaviour through which companies exploit opportunities that others have not noticed or aggressively pursued. Novelty, in terms of new resources, customers, markets, or a new combination of resources, customers, and markets, are the defining characteristics of entrepreneurial actions. Entrepreneurship includes acts of creation, renewal, or innovation that occur within or outside a business. Entrepreneurship is especially important for firms facing rapid changes in industry and market structures, customers' needs, technology, and societal values.

Recently more attention has been paid to entrepreneurial orientation than to corporate entrepreneurship. Many scholars consider entrepreneurial orientation to be an aspect of corporate entrepreneurship. Researchers concur that, in essence, entrepreneurial orientation is measured by the constructs innovativeness, risk-taking and proactiveness. Dess (1996:140) includes the constructs: autonomy and competitive aggressiveness later. Zahra and Covin (1995:48) state that entrepreneurial orientations could only be constituted after an entrepreneurial culture which supports entrepreneurial climate. Internal organisational factors flourish and encourage corporate entrepreneurship and give opportunity to initiate entrepreneurial behaviour.

Hornsby *et al.* (1993:33) assert that the decision to act entrepreneurially occurs as a result of an interaction between organisational characteristics, individual characteristics and some kind of precipitating event. In order for a company to be considered as entrepreneurial, some organisational and individual characteristics are essential.

Kuratko *et al.* (1990) developed a multidimensional scale consisting of five factors to summarise the major sub-dimensions of the concept of intrapreneurship.

Kuratko *et al.* (2007:60) explain that a firm's strategy is the set of commitments and actions, taken to develop and exploit a competitive advantage in the marketplace. Because they are the source of how firms create value, being able to develop and exploit one or more competitive advantages, is a universal objective of all companies. A competitive advantage "is the result of an enduring value differential between the products or services of one business and those of its competitors in the minds of customers." Companies able to exploit the competitive advantages they own today, while simultaneously make decisions to shape the advantages they intend to own and use tomorrow, and increase the probability of long-term survival, growth, and financial success.

Zahra *et al.* (2001:5) explain that a virtual revolution of the value of entrepreneurial actions as a contributor to firm performance took place from the late 1980's throughout the 1990's. This was a period during which companies were redefining their businesses, thinking about how to most effectively use human resources, and learning how to compete in the global economy. In short, "some of the world's best-known companies had to endure painful transformation to become more entrepreneurial." These companies had to endure years of reorganisation, downsizing, and restructuring. These changes altered the identity or culture of these firms. It infused a new entrepreneurial spirit throughout their operations.

Principalship, like management, is an organisational concept. It designates a structural position which carries with it responsibilities and accountabilities. Principals are in structural positions within institutions and are bound by the goals and primary tasks of the institution, and their successes and failures are judged in terms of these. They are officially accountable for the operations and outcomes of the institution. Leadership should be dispersed throughout the school; management activities should be delegated with proper resources and accountabilities; and heads should integrate vision and

values with the structures and processes by which the school realizes these. Clearly, however, this is an idealised picture - a school of dreams, rather than our current experience of the South African education system.

Perhaps the first step in understanding the complexity of leadership in schools in current times is to recognise the difficulty to integrate leadership and management in the practices of running schools, to bring a coherence that links substance to process and deeper values to daily tasks. The purpose of the study is to explore entrepreneurial orientation as a strategy to enhance principalship and school leadership. The possibility of employing the dimensions of entrepreneurial orientation as an antidote against staleness is investigated. As indicated in Chapter 4 it is clear that South African schools are in desperate need for school leadership based on new practices to lead institutions to excellence and effectiveness.

As the 21st century unfolds, entrepreneurial actions continue to be seen as an important path to competitive advantage and improved performance in firms of all types and sizes. Some even believe that the failure to use entrepreneurial actions successfully in the fast-paced and complex global economy is a recipe for failure.

CHAPTER 3

OVERVIEW OF PUBLIC ENTREPRENEURSHIP AND THE EDUCATION SECTOR IN SOUTH AFRICA

3.1 INTRODUCTION

According to basic and applied research, as mostly evidenced over the last decade, it is vital for large traditionally managed organisations to support entrepreneurial behaviour across all hierarchical levels, in order to improve performance (Zampetakis & Moustakis, 2010: 872). Furthermore, Shaw, O'Loughlin and McFadzean (2005:400) claim that entrepreneurial behaviour within organisations (or corporate entrepreneurship) is regarded as a vehicle for increased organisational growth, strategic renewal, organisational change, and customer value-added services.

Zampetakis and Moustakis (2010:872) explain that the literature demonstrates strong consensus that, to some extent, entrepreneurial behaviour is present in all businesses, irrespective of size or type (Borins, 2000:499; Drucker, 1985). Drucker (1985) argues that almost anyone can be an entrepreneur if the business is structured to encourage entrepreneurship. However, research on the factors or practices that motivate entrepreneurial behaviour in the public sector is limited (Zerbinati & Souitaris, 2005:43).

Kim (2010:782) determines that the virtues of the traditional ideas about government have been challenged, and significant changes have emerged in economic, societal, demographic, and cultural movements. The need to be more competitive in a turbulent environment demands changes in the role of government. The public sector has created innovative ways of structuring and managing governmental arrangements as a consequence of administrative reform activities. With the goal of performing governmental tasks effectively, a number of market-based approaches have been introduced into the public sector; such as privatisation, public-private partnerships, outsourcing, and entrepreneurship.

Boyett (1997:78) argues that this form of entrepreneurial government has been introduced as a means to provide market-oriented practices for better services. The adoption of some beneficial entrepreneurial practices into the public sector could be a sound approach for satisfying citizens' needs for a more efficient, more responsive, and lower cost government. Kim (2010:781) finds that despite the enthusiasm and widespread belief in the applicability of entrepreneurial practices to the public sector, there are still on-going debates about their suitability to public institutions in terms of the core values of the public sector. The idea of public entrepreneurship is to increase opportunities, confront challengeable ideas and find ways to offer more public choices and benefits, providing high-quality services to citizens.

Bozeman (2007:7) explains that, unlike privatisation or contracting out, which reduces the public sector's involvement and responsibility as a significant service provider (Morris & Jones, 1999:73), market-based practices like public entrepreneurship provide many advantages and have important roles to play in public policy and management. Thus, adopting entrepreneurial practices, such as searching for innovative opportunities and providing the ability to be proactive, can improve in-house capacities for contributing to the public values of sustainability and productivity and could be the best way to resolve recurrent perceptions of less efficient services.

Hughes (1998:370-371) explains that public sector entities are often portrayed as bureaucratic, conservative and disingenuous monoliths. Drucker (1985:241) proposes that one of the great social innovations required to realign the modern economy is to "organise the systematic abandonment of outworn social policies and obsolete public service institutions".

3.2 PUBLIC ENTREPRENEURSHIP

Ramamurti (1986:143) indicates that *public entrepreneur* sounds like a contradiction in terms. Entrepreneurs are usually thought of as individuals who require a great deal of freedom to make decisions, take risks and earn a personal fortune. The public sector

seems like the last place in which such individuals would find a home, given the limited autonomy it provides, the extensive bureaucratic and political controls to which it subjects them and the meagre incentives, if any, that it offers them for taking risks. Kearney, Hisrich and Roche (2009:28) agree with Ramamurti (1986:145) that the attributes of the public and private entrepreneur are not the same. Some aspects of the definition of “entrepreneur” used in the private sector context cannot be applied to the public sector. Economists state that an entrepreneur must be profit-oriented. This is not appropriate in the context of the public sector, as profitability is not their primary goal.

Kearney *et al.* (2009:26) explain that “enterprise” no longer just refers to the creation of an independent business venture or the characteristics of model entrepreneurs or successful independent business people. It refers to the ways in which economic, political, social and personal vitality is best achieved by generalising a particular conception of enterprise form to all forms of conduct to the conduct of businesses previously seen as non-commercial, government and its agencies and individuals”. Thompson (1999:209) says that entrepreneurs can be found in many walks of life; entrepreneurship extends far beyond the small business owner-manager sector, with which it is ubiquitously linked. Large businesses as well as small, public and private sector businesses all need to be enterprising, although there are too many businesses in both the private and public sectors which have restrained or even destroyed creativity as they have grown.

Definitions of public sector entrepreneurship are limited and diverse. Ramamurti (1986:146) defines a public entrepreneur as “an individual who undertakes purposeful activity to initiate, maintain or aggrandise one or more public sector organisations”. Leyden and Link (2015:476), furthermore, define public-sector entrepreneurship as the process of identifying and exploiting heretofore unexploited opportunities, by people in the public sector, engaging in the uncertain process of public-sector innovation. Haytor (2015:1003) is of the viewpoint that public sector entrepreneurship occurs when a government or non-profit agent recognises an opportunity and takes, depending on the

context, direct or indirect action, that leads to robust social networks and creates positive economic activity.

Xu and Carey (2013:10) describe public entrepreneurs as public-policy pioneers who can identify potential value-creation opportunities. These opportunities are often suppressed by status-quo inertia, marshalling public resources in concert with private resources for fulfilling the “imagined” vision, and fostering a mutually-reinforcing, synergy creating interaction between public actors and private actors, turning *latent* value creation and capture into *realised* value creation and capture. At the heart of the transformative process is the role of public entrepreneurship, with three core generic features: alertness to opportunities; judgmental decision-making under uncertainty; and bold and creative innovation.

Osborne and Brown (2011:1346) explain that there is a growing demand and pressure for the public sector to become more innovative (Borins, 1998:47), in response to rising citizen expectations, dire fiscal constraints and a growing number of ‘wicked problems’ that, due to their complexity, cannot be solved by standard solutions or by increasing the funding of existing mechanisms. Hartley, Sorensen and Torfing (2013:824) explain that while the effects of public innovation are sometimes evaluated differently by public and private stakeholders, and may contain significant trade-offs (Abrahamson, 1991:606; Hartley, 2005:27), there is a growing perception that innovation can contribute to growing productivity, service improvement and enhance the problem-solving capacity in the public sector, even though not all innovations are effective or involve improvement. They assert that the public sector should become more innovative, flexible and efficient by introducing market-based competition and private sector management techniques. Ramamurti (1986:143) agrees that there is a great demand for the public sector to become more innovative and dynamic.

Bellone and Goerl (1992:130) are of the opinion that public entrepreneurship is the answer to “declining federal grants and the growing fiscal crises faced by governments at all levels of the federal system”. Their definition of public entrepreneurship is that

public administrators as entrepreneurs and agents of entrepreneurial states seek to find new sources of revenue, besides the more traditional taxes, to increase tax bases through economic development projects and to augment the number of private-sector entrepreneurs within their boundaries.

Morris and Jones (1999:74) define public sector entrepreneurship as the process of creating value for citizens by bringing together unique combinations of public and/or private resources to exploit social opportunities. Osborne and Gaebler (1992) define public entrepreneurship as a continuous attempt to apply resources in new ways, so as to heighten the efficiency and effectiveness of public institutions. Linden (1990) adds that public entrepreneurship is the purposeful and organised search for innovative changes in public sector institutions and operations.

Kearney *et al.* (2007:279) describe public sector entrepreneurship, as an individual or group of individuals, who undertakes desired activity to initiate change within the institution, adapt, innovate and facilitate risk. Personal goals and objectives are less important than the generation of a good result for the state enterprise/civil service. A more comprehensive definition comes from Boyett (1997:90) who argues that entrepreneurship occurs in the public sector where there is an uncertain environment, devolution of power, and at the same time re-allocation of resource ownership to unit management level. It is driven by those individuals, particularly susceptible to the “manipulation” of their stakeholders and with a desire for a high level of social “self-satisfaction”, who have the ability to spot market opportunities and who are able, through follower “manipulation”, to act on them.

Borins (1998:57) finds that opportunities for innovation in the public sector arise from circumstances peculiar to the public sector and that innovation is much less focused on commercial considerations than in the private sector. It is important to recognise these main differences in order to engender entrepreneurship within the public sector and obtain the benefits that are generated by an effective entrepreneurial culture.

Kearney *et al.* (2009:28) describe public sector entrepreneurship as the process that exists within the public sector that results in innovative activities such as the development of new and existing services, technologies, administrative techniques, new or improved strategies, risk-taking, and pro-activity. Personal goals and objectives are less important than the generation of a good result for the institution.

Public entrepreneurs need to take their political authority seriously and follow the principles of democratic theory in policy design and implementation. This is reflected in the statement of Bellone and Goerl (1992:132) that public entrepreneurs “also need to be concerned with a more active approach to administrative responsibility which includes helping to facilitate increased citizen education and involvement”. Bellone and Goerl (1992:131) add that the important characteristics of public entrepreneurs- autonomy are a personal vision of the future, secrecy, a risk-taking-need to be reconciled with the fundamental democratic values of accountability, citizen participation, open policymaking processes, and concern for the long-term public good (stewardship).

Kearney *et al.* (2009:28) conclude that entrepreneurialism in the public sector, unlike the private sector, does not rely upon particular individual attributes, but on a group desire in institutions to change, adapt, innovate and entertain risk, where personal qualities and motivations are far less important than the generation of a galvanic force at the institutional and collective levels (Forster, Graham & Wanna, 1996).

Public sector entrepreneurship and public schools

Public schools in South Africa are part of the public sector. For the purpose of this study, “school manager” was replaced with “principal” to make it more applicable in the South African context. Based on the meaning of entrepreneurship, Hamzah *et al.* (2009:536) are of the opinion that the time has come for the educational institutions to absorb entrepreneurship characteristics, especially where the school administrators are concerned. This would turn them into social entrepreneurs who can make use of the

limited resources surrounding them, to create profits in the form of shaping well-rounded students. Due to the globalisation and liberalisation challenges, choosing principals and school administrators has become more dynamic and aggressive, in order to handle the problems in schools. The strength of the school lies in the competencies of the principal. They have to have a set of comprehensive skills, and it is possible that, with the absorbing of entrepreneurship characteristics, education institutions will be more successful, due to principals who can be social entrepreneurs.

Yemini *et al.* (2015:528) explain that entrepreneurship is considered to be a driving force of change and innovation, introducing opportunities to achieve efficient and effective performance in both the public and private sectors. The phenomenon of entrepreneurship is intertwined with a multifaceted set of overlapping constructs, such as the management of change, innovation, and ecological and environmental turbulence.

Fernald, Solomon and Tarabishy (2005:7) highlight that, despite the continuous debate over the definition and core concept of entrepreneurship, researchers concur that entrepreneurs are risk-takers, high achievers and are creative in their approaches to producing unique goods and services. Sheingate (2003:188) adds that entrepreneurship can be regarded as one feature of extraordinary leaders whose innovations or solutions to pressing problems bring benefits.

Traditionally, according to Borasi and Finnigan (2010:3), entrepreneurship was associated with the private sector and for-profit business organisations, with entrepreneurial innovations considered to be those directed toward the marketplace. Therefore, the phenomenon initially received marginal attention in public educational settings. Levin (2006:31) explains that schools are the focus of great expectations, but habitually charged with disappointing results and an inability to meet expectations. Education is widely believed to be the solution to major social challenges, including those of workplace productivity, economic competition, social equity, civic behaviour, technology, cultural knowledge, and effectiveness of democracy. In response to these

persistent issues, schools are under constant pressure to change, but one of the most common complaints about education is its resistance to change.

Yemini *et al.* (2015:529) explain that education researchers have applied different approaches to entrepreneurship than those working in for-profit settings, because of the fact that education is generally a non-profit field (Borasi & Finnigan, 2010:3; Ruvio, Rosenblat & Hertz-Lazarowitz, 2010:154). Indeed, school entrepreneurship falls under the term 'corporate (organisational) entrepreneurship': a business' tendency to initiate and implement both incremental and radical innovations in its internal and external environments (Eyal, 2007:2).

Corporate entrepreneurship has been labelled 'intrapreneurship' (Pinchot, 1985), and typically has been investigated through the lens of big businesses in a fluctuating, competitive environment. Yemini *et al.* (2016:529) mention that in the school setting, in contrast, leadership innovation takes on an aspect of social entrepreneurship that encompasses innovative activities with a social objective, in both for-profit and non-profit businesses (Austin *et al.*, 2006:2). In this regard, Selman (2002:4) proposes that innovation is an intentional action to bring about something new which can be sustained and has some value or utility. It is about making new tools, products or processes, and bringing something 'new', which allows people to accomplish something they were not able to accomplish previously. Innovation carries an expectation for change and improvement.

Attali and Yemini (2016:2) indicate that in education, innovations can be related to school practices, standards and policies (Pacheco *et al.*, 2010:982) in various areas such as pedagogy, that is, curricular content and instructional strategies with immediate impact at the classroom level organisation - practices and structural designs that do not directly affect classroom techniques or content (Lubienski, 2003:405) - and on social concerns, which involve creating arrangements to solve social problems, by pursuing opportunities to catalyse social change and/or address social needs in innovative ways and with combinations of resources (Mair & Marti, 2006:36).

Pihie *et al.* (2014:4) show that educators and researchers have looked at the benefits of entrepreneurship for school improvement in two ways. Firstly, entrepreneurship, in general, and entrepreneurial leadership, in particular has been considered as ways of thinking and changing lifestyles, rather than merely establishing new businesses (Klein & Bullock, 2006:436). In this sense, entrepreneurial characteristics and approaches can be applied to improve all aspects of education and schooling, specifically school leadership through influencing individuals' behaviour and their task performances (Berglund & Holmgren, 2006). Accordingly, school principals need to acquire and practice entrepreneurial leadership characteristics in order to improve their schools' effectiveness and to facilitate the process of school innovation (Hamzah *et al.*, 2009:536). Secondly, researchers have focused on the advantages of organisational entrepreneurship (Holt, Rutherford & Clohessy, 2007:52, Kuratko *et al.*, 2007:68) for school organisation improvement. In this context, organisational innovativeness reflects the capacity of a school to develop and implement novel ideas that lead to critical changes and improvements at the school (Eyal & Kark, 2004:227; Eyal & Inbar, 2003:224).

Pihie *et al.* (2014:4) suggest that entrepreneurial leadership competencies can help school leaders to face the complexities and constraints of the school environment, such as fast changes, limited resources, the variety of factors affecting school performance and the urgent need for preparing learners for their highly competitive futures (Xaba & Malindi, 2010:78; Morris, Coombes, Schindehutte & Allen, 2007:16). These competencies also enable school leaders to create the dramatic changes and innovations required in public schools, by looking beyond the current status of the school and developing new opportunities for school improvement (Eyal & Kark, 2004:229). Hamzah *et al.* (2009:537) agree that it is time for principals to acquire entrepreneurial characteristics to improve the success of schools.

Blake and Mestry (2014:163) discovered that South African schools have joined many countries across the world in a shift towards self-governance or decentralisation (Bush 2005:2). The ultimate logic to this is that schools, to increase their effectiveness, will

want more control over their level of funding. The enactment of the Schools Act, 84 in 1996 (South Africa 1996(a)) effectively placed schools in the hands of the school community (Vandeyar, 2002:93). As in most countries, the lack of state funding to schools undermines the delivery of quality education in South Africa (Mestry & Bisschoff, 2009:41). Sufficient financial resources are needed to address issues such as teacher-student ratios, student support services, teacher morale, teacher remuneration, technologically advanced school equipment and facilities – the list continues. Parents bear the brunt by contributing more and more towards the education of their children (Bisschoff, Du Plessis & Smith, 2004:78).

Blake and Mestry (2014:164) believe that there is a need for school principals in South Africa to engage in active entrepreneurial activities. Entrepreneurship can be seen as an approach to general management that begins with opportunity recognition, and culminates in the activities of planning, organising, leading and control (De Beer, Kritzing, Venter, Steyn, Labuschagne, Ferreira, Groenewald & Stapelberg, 2002:3; Chaston, 2009:21). School principals have an integral part to play in the management of a school's resources (South Africa 1996(a): Section 20(1)(a)). According to Peck (1991:516) and Denhardt, Denhardt and Aristigueta (2009:180), school leaders who become increasingly entrepreneurial, would be committed to educational reform, and would have the ability to help teams of teachers create powerful shared visions to bring about dramatic change in their host institutions.

Blake and Mestry (2014:166) show that the initial factor that sets into motion entrepreneurial activity is the psychological predisposition of the entrepreneur. Schaper and Volery (2004:31) view entrepreneurs as typically those people who relentlessly pursue their project, feel that they can control their lives, and are able to take risks. Knight (1997:4) is of the viewpoint that the dominant issue obstructing entrepreneurial leadership in schools currently is principals themselves (Knight, 1997:4). The degree to which a school's principal will engage in entrepreneurial activity, will depend on his or her view of what entrepreneurship entails, as well as the role that he or she should play

with regard to it. Often, not all principals are equipped to perform these functions and roles, and as a result, are hesitant to engage in entrepreneurship (Knight, 1997:49).

Borasi and Finnigan (2010:2) notice that today's educators are increasingly called to become "agents of change" in order to better meet the needs of the students, families, and communities they serve and thus fulfil society's growing expectations of educators' civic responsibility. Yet educators usually receive little formal preparation to help them effectively initiate change.

3.2.1 The application of the entrepreneurial process to an educational institution

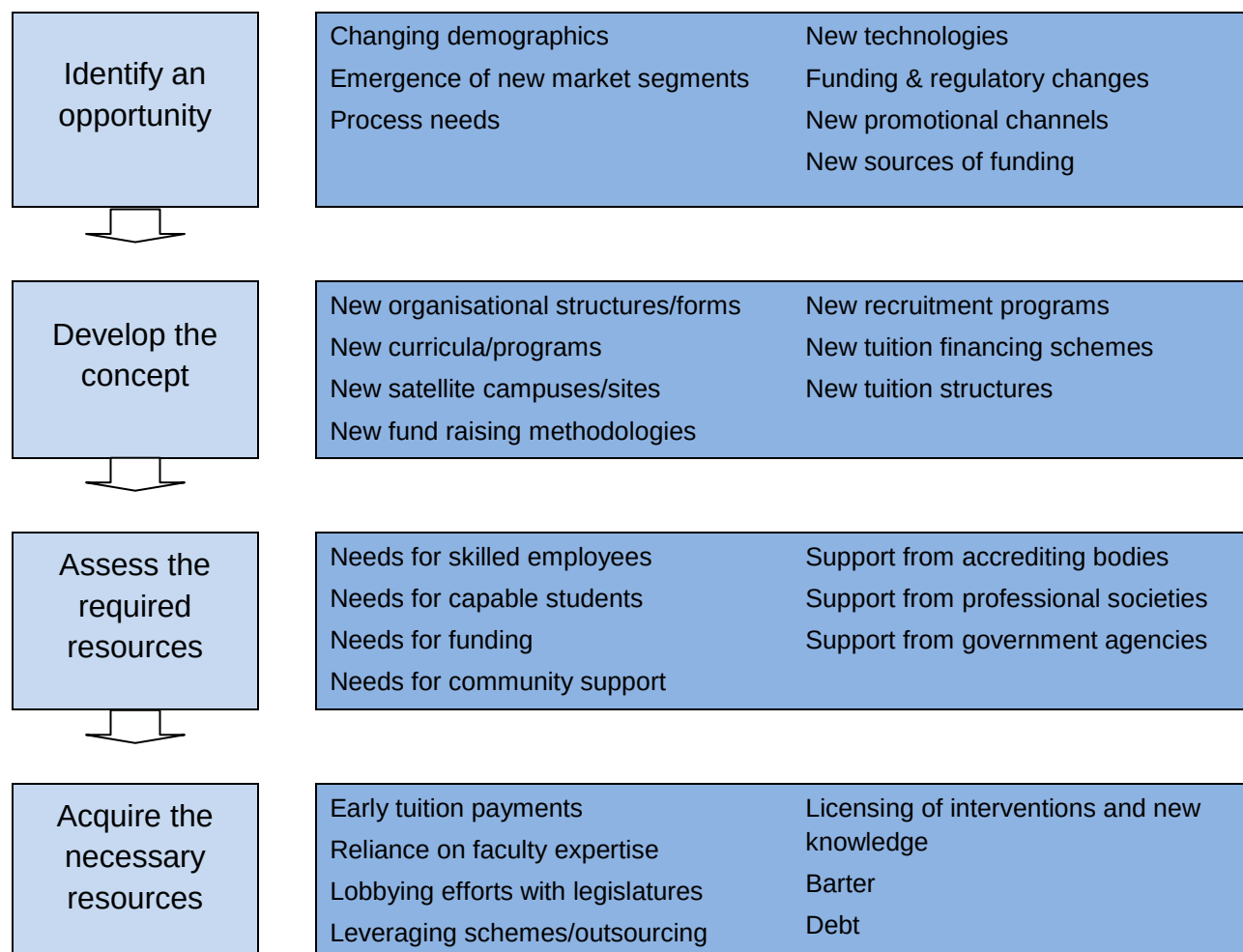
Stevenson *et al.* (1989) explain that entrepreneurship refers to the process of creating value by bringing together a unique combination of resources to exploit an opportunity. This process, according to Morris and Jones (1999:73), requires both an entrepreneurial event and an entrepreneurial agent. The event refers to the conceptualisation and implementation of a new concept, idea, process, product, service, or venture. The agent is an individual or group who assumes personal responsibility for bringing the event to fruition. The entrepreneurial process has attitudinal and behavioural components. Attitudinally, it refers to the willingness of an individual or business to embrace new opportunities and take responsibility for effecting creative change (Miller & Friesen, 1983). Behaviourally, according to Stevenson, *et al.* (1989), the process includes the set of activities required to: a) Identify and evaluate an opportunity; b) Define a business concept; c) Identify the needed resources; d) Acquire the necessary resources; and e) Implement, operate, and harvest the venture.

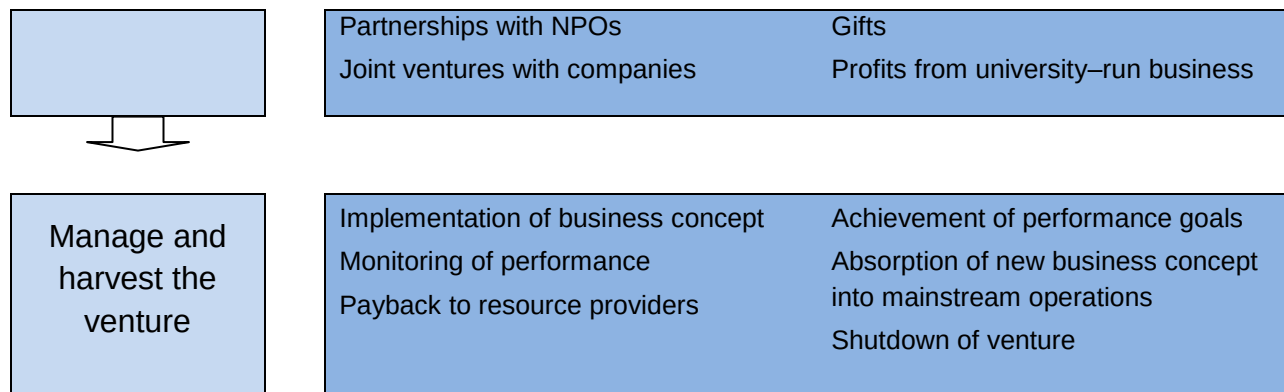
Morris and Jones (1999:74) explain that the basic steps identified in this process, should be no different in a public sector concept. Figure 3.1 provides an example of the application of these steps to a public university. Some of the tools and concepts from the private sector that are useful for understanding or facilitating developments in each stage of the process, are equally applicable to the public sector (e.g.

window of opportunity and leveraging of resources), while others must be adapted (e.g. criteria for evaluating an opportunity, sources of entrepreneurial concepts, and harvesting strategies). Some others though are not really applicable (e.g. competitive entry wedge and criteria for selecting financing sources).

Morris and Jones (1999:74) show that entrepreneurship has the same underlying dimensions when applied in a public context. Innovativeness tends to be more concerned with novel process improvements, new services and new organisational forms. Risk-taking involves pursuing initiatives that have a calculated likelihood of resulting in loss or failure. Pro-activeness entails an action-orientation and an emphasis on anticipating and preventing public sector problems before they occur.

Figure 3.1: The entrepreneurial process as applied to a public university





Source: Morris and Jones (1999:75)

3.3 EDUCATIONAL ENTREPRENEURSHIP

Bazaz (2016:40) claims that an effective education system can bring a number of benefits to the society. The contribution of education very much depends on the type and quality of education which society imparts. The education system can pave the way for social and sustainable development, only when everybody gets fair and just opportunities to cherish their right to education. Levin (2006:31) highlights that education is widely believed to be the solution to major social challenges, including those of workplace productivity, economic competition, social equity, civic behaviour, technology, cultural knowledge and effectiveness of democracy. In response to these persistent issues, schools in most countries are under constant pressure to change, often in conflicting directions.

Entrepreneurs and entrepreneurship are always related to business. According to Hamzah *et al.* (2009:535), we hardly find the term to be related to educators and school principals. Entrepreneurship characteristics are virtuous characteristics which can be the foundation for future educators and school administrators, enabling them to find opportunities and create opportunities for others in the context of schools or other educational institutions. According to Levin (2006:3), the broad definitions of entrepreneurship suggest a potential key role of entrepreneurship in education, through innovation and managerial breakthroughs, providing the spark

needed to improve the productivity, quality and equity of education. Schools are the focus of great expectations, but habitually charged with disappointing results and an inability to meet expectations.

Dutta, Li and Merenda (2010:163) explain that entrepreneurial ventures play a fundamental role in maintaining the economic vitality of a nation. This is done through opportunity recognition, generation of new business ideas, economic activities, value-creation, and employment generation. Yemini *et al*, (2015:528) agree that entrepreneurship is considered to be a driving force of change and innovation, introducing opportunities to achieve efficient and effective performance in both the public and private sectors. According to Borasi and Finnigan (2010:2), traditionally, entrepreneurship was associated with the private sector and for-profit business businesses, with entrepreneurial innovations considered to be those directed toward the marketplace. Therefore, the phenomenon initially received marginal attention in public educational settings.

Therefore, as explained by Attali and Yemini (2016:5), the exact meaning of entrepreneurship in education is not clarified, nor is this specific entrepreneurial domain conceptually differentiated from other entrepreneurial domains (Man, 2010:2). Eyal and Inbar (2003:224) are among the few researchers who concentrate on defining this concept. Their definition is based on Miller's (1983) definition of for-profit entrepreneurship, presented earlier, which characterises entrepreneurship as innovation, pro-activity, and risk-taking. Eyal and Inbar (2003:224) adopt this definition for the educational context of the term, absent of Miller's risk-taking dimension. Wiseman (2014) also claims that the risky characteristic of entrepreneurship is not relevant to either the social or the public sectors. In contrast, Ellison (2009:30) argues that innovative public education is characterised by decentralised decision-making, space for risk-taking, and strong support systems to encourage risk-taking and spread innovative ideas.

Attali and Yemini (2016:5) identify the concept of innovation as dominant in the discourse regarding entrepreneurship in education. Man (2010:2) concurs that entrepreneurship in education relates closely to the themes of leadership, innovation, and change. Smith, Petersen and Fund (2006:2) define entrepreneurs in the education sector as innovators who may lead to the transformation of the public education system. Wiseman (2014:8) formulates an equation to explain innovation in education: legitimised expectations - educational outcomes = necessary innovation.

Several researchers discuss entrepreneurship in education as a figure of the entrepreneur in the education field. Teske and Williamson (2006:50) define educational entrepreneurs as individuals seeking to instigate changes in the public education system, in a manner that will disrupt, transform, or radically alter the way education is provided – including business people who seize an opportunity in the education market. Borasi and Finnigan (2010:2) define educational entrepreneurs as educators who consistently turn ideas into initiatives that create value to their institutions and to the customers they serve. Leffler (2009:110) describes the entrepreneurial teacher as one who dares to break patterns and thinks in new ways, thereby creating change. In contrast to individual-based definitions, Man (2010:4) argues that the term should only cover educational ventures undertaken by institutions, since other related initiatives can be defined by various existing paradigms. Wiseman (2014:8) emphasises the government's role in entrepreneurship in education, given the national responsibility for public education in most countries.

Scott and Webber (2012:3) argue that educational entrepreneurship focuses strategically on creating short- and long-term opportunities for learning that will make a significant difference for individuals and their societies. Financial return sufficient to ensure that quality programming is an important consideration in educational entrepreneurship, but not its *raison d'être*. The primary purpose of educational entrepreneurship is rather the building of human and social capacity to lead responsible, constructive educational initiatives. Coupled with educational entrepreneurship is the necessary consideration of incorporating and structuring sustainability to ensure that the

programs, teaching, and outcomes are of a consistently high standard. Therefore educational entrepreneurship can include teachers as well as students, as learners within the learning organisation.

Man (2010:3) explains that, from a conventional entrepreneurship perspective, the rise of educational entrepreneurship can be attributed to the existence of market opportunities in the education sector. Thus, the role of educational entrepreneurs is to provide timely services or products to the education market. Opportunities in the education context are not necessarily profit-oriented. Entrepreneurship is initiated by some talented and highly motivated individuals (Schumpeter, 1934). In the context of education, those individuals who bring about new educational changes, initiatives and institutions, can be considered educational entrepreneurs.

Smith *et al.* (2006:29) derive that the public education system was designed to ensure stability for students. However, in our current knowledge age, change is the new constant. Technology, medicine, and other fields are now based on constantly evolving cycles of improved knowledge. Educational entrepreneurs can bring this critical “dynamic equilibrium” to public education, making them a permanent necessity rather than merely temporary agents of change. In other words, they *are* the change we wish to see in the education sector.

Hess (2007:1) believes that educational entrepreneurship is also related to the institution-level activities which lead to innovation and change. Smith *et al.* (2006:30) concur that educational leaders initiate innovations and changes, and they also respond to the changes and opportunities generated externally. Therefore, educational entrepreneurship is highly relevant to the phenomena of leadership, innovation and change. From their study they have derived six key principles implicit in this view, and stated what it might imply for supporting education entrepreneurs:

Six Principles of an Entrepreneurial School System

1. *Responsive.* In a dynamic, ever-changing world, public school systems should be responsive to changes in the needs of students, families and communities. If schools are not permanent, but rather opened and closed, based on how well they are serving market needs, the supply of schools will be aligned with demand.

2. *No monopolies or oligopolies.* Monopolies and oligopolies are fundamentally closed, unresponsive systems that aggregate power and maintain it - even if results are unsatisfactory. Such inflexible practices should not be tolerated in public education.

3. *Customer-oriented.* Public education has many “customers”, including parents, communities that provide funding and businesses that employ schools’ graduates. In order to satisfy their mission, though, public schools must focus first and foremost on the needs of *students* - not *adults* or *institutions*. As such, there must be a diverse supply of schools that address the unique learning needs of students, along with customised instruction within those schools, and mechanisms that support choice and information for parents and communities.

4. *Performance-driven.* With improved results for students as the target, public school systems must manage toward not only effectiveness, but also efficiency (less time and money for the same results). There must be clear goals, alignment of resources toward those goals, and constant assessment and adjustment of those goals and resources - based on progress.

5. *Constant learning.* In a dynamic environment, the work of public education is never completed. As soon as one level of performance is achieved, the next target becomes clear, with continuous improvement always a priority. This cycle of on-going learning applies to student instruction as well as the management of schools and school systems.

6. *Culture of meritocracy*. When results are the priority, those who find a way to achieve those results are rewarded for their efforts.

Drobnic (2015:7) highlights the particular challenges and constraints facing entrepreneurial leaders working within the education sector. These have been identified within the literature as having a potentially limiting effect on the ability of leaders to act 'entrepreneurially'.

- The individualism of entrepreneurialism versus the democratic governance of schools.
- The bureaucracy inherent in the public sector.
- Being answerable to a range of stakeholders, students, parents, governors, sponsors, governments, etc., this has the potential to impose incompatible demands on school leaders (Currie, Humphreys, Ucbasaran & McManus, 2008:990).
- Performativity and accountability agendas - targets, inspections, league tables.
- Working within education systems around the world where principals have limited autonomy over resources, staffing, and curriculums.

Scott and Webber (2012:3) indicate that the six central elements and attributes of entrepreneurship in educational institutions are firstly *innovative behaviour*. Secondly it is *networking*, characterised by two attributes, namely information acquisition necessary to lead positive change, and successful adaptation to changing conditions through the manifestation of flexible and resilient behaviour. The third element, *time-space communication framework*, employs new technologies to communicate synchronously and asynchronously with local and distributed audiences in ways that reflect temporal variability. The fourth element, *local-global perspective*, requires entrepreneurs to

develop cultural literacy and multidimensional perspectives that enable them to work responsibly with local, national, and global communities. Fifthly, the conceptualisation of *educational institutions as knowledge centres which* encourages all members of institutions to create and mobilise knowledge in the best interests of the learning communities. The sixth element, *integrated face-to-face and Internet-based learning*, recognises the opportunities that the information age presents to educational institutions, enabling them to succeed in a competitive international environment through the formation of strategic alliances.

3.4 SCHOOL PRINCIPALS AND ENTREPRENEURSHIP

Kurland, Peretz and Hertz-Lazarowitz (2010:7) are of the opinion that the success of schools fundamentally depends on school leaders. Numerous studies claim that school leaders are held accountable for how well teachers teach and how much students learn (Fullan, 2002; Dinham, 2005), and are essential for high-quality education (Leithwood & Riehl, 2003; Harris, 2005; Hallinger, 2003; Stewart, 2006). Brauckmann and Pashiardis (2011:11) state that in the school environment, where various pressures and external challenges are identified, there is an increasing recognition of the importance of school leadership for supporting change and providing educational quality.

Ayub and Ortman (2013:69) explain that effective schools are made up by each component of society, whether the component is the school's community of students, teachers, administration, principals and representatives, or the entire community in a broader sense. Basically, the purpose of school education is to ensure the effectiveness of teaching and learning, and it is also the responsibility of the school's leadership to create and maintain a conducive atmosphere for both learning and teaching.

Eyal and Kark (2004:209) find that businesses in general and schools more specifically, are currently functioning in a highly competitive global environment, characterised by rapidly changing technologies. Studies indicate that: the increase in uncertainty, complexity, and competitiveness; scarceness of resources; and the need for continual

change, in both non-profit and for-profit businesses, have made entrepreneurship a vital asset for organisational survival, growth, and productivity (Damanpour, 1991; Howell & Higgins, 1990).

Brauckmann and Pashiardis (2011:11) explain that at the beginning of the twenty-first century, we are experiencing a rapidly changing environment with various shifts in every domain of human activity. Technological, scientific and economic advancements, as well as globalisation and immigration movements are just a few of the areas giving rise to complexity and uncertainty in the modern world. These societal changes have inevitably transformed the school environment into a more dynamic and complex one than in the past (Crow, 2006:310). Kythreotis, Pashiardis and Kyriakides (2010:218) have identified school leadership as a key element in the effectiveness of educational institutions. As a result, the various stakeholders have widened their expectations from schools principals, demanding higher academic results and performance standards (Weindling & Dimmock, 2006:335).

Zahra *et al.* (1999:7) recognises corporate entrepreneurship as an organisation-level phenomenon. Consequently, it has been argued that entrepreneurship can be described as a business' constant tendency to initiate and implement incremental as well as radical innovations in both its internal and external environments (Herbert & Brazeal, 1998). Caruana, Ewing and Ramaseshan (2002:50) suggest that entrepreneurship should be examined in terms of both the internal and external organisational environments. According to Eyal and Kark (2004:210), studies indicate that the roles of managers and leaders as change-oriented agents and as entrepreneurs are stressed (Schein, 1996; Spreitzer, Janasz, & Quinn, 1999; Work, 1996).

Xaba and Malindi (2010:76) claim that the very nature of schools makes it difficult to embark on innovative ventures outside prescribed policy directives and regulations. To this end, Hess (2007:22) points out that schools confront challenges that the education system was not designed to handle. While there have been numerous initiatives aimed

at improving education service delivery, the nature of schools has often inhibited the practice of pro-activeness, innovativeness and risk-taking as levers for continuous renewal of schools. In elaboration, Davis (2006:10) raises the following issues regarding why innovation and, by implication, entrepreneurial orientation, is difficult at schools:

- Schools are harmonious systems where people gravitate towards system norms and much attention is devoted to optimising routine activities.
- Pressure for accountability and standardisation inhibit curiosity and the exploration of innovative ideas.
- Scarce and unpredictable fiscal resources discourage innovation and risk-taking.
- Public notions of good schooling are notoriously conservative and rooted in practices of the past.
- The continuously swinging pendulum of reform can become tiresome to veteran educators and, as a result, they seek refuge in their work and become resistant to the diffusion of innovation.
- Sclerotic hierarchies and enduring adherence to principles of scientific rationalism dominate organisational structures at schools and, as a result, there is little room for independent or divergent thinking and there is little tolerance for the non-linearity associated with the creative process.
- Experimenting with and using untested methods and materials on children raise serious ethical issues.

Xaba and Malindi (2010:77) explain that entrepreneurship in the school organisational sense implies an entrepreneurial orientation, which relates to seeking out opportunities that improve both the material and instructional conditions. Principals are expected to

be entrepreneurial in order to obtain the necessary resources, funding and contacts for their learners' success and must forge significant partnerships with community organisations and corporations (Levy, 2005).

Pihie and Asimiran (2014:1) claim that entrepreneurial leadership is a distinctive type of leadership required for dealing with the challenges and crises of the current organisational settings (Gupta, MacMillan & Surie, 2004:244). This leadership style enables leaders to successfully direct their business and solve the problems through different steps of the business' growth and development (Chen, 2007:241; Swiercz & Lydon, 2002:381). It also has great influence on leaders' competence in recognising new opportunities to improve the business' performance (Chen, 2007:241; Okudan & Rzasa, 2006:196; Gupta *et al.*, 2004:246). These influential effects have led scholars to increasingly apply entrepreneurial leadership to improve various aspects of education and specifically school performance (Xaba & Malindi, 2010:77; Berglund & Holmgren, 2006; Eyal & Kark, 2004:218; Eyal & Inbar, 2003:223). According to Park (2012:90), entrepreneurial leadership has been emphasised to create a supportive environment for change and innovation at schools.

Deal and Hentschke (2005:34) contend that among other features, entrepreneurial principals are relentlessness and able to motivate others, which means that they do not get discouraged easily; have unbending ideologies, pragmatic approaches and pride; have tolerance for risk; have ambition, perseverance, decisiveness, and communication skills; and have self-motivation.

Xaba and Malindi (2010:78) add that an entrepreneurial principal should also possess qualities of an entrepreneurial spirit, which include visionary leadership, which is key to identifying opportunities; courage and prudent risk-taking, which are necessary for making the opportunities come alive; being agents of change within the school; a diversity of experience and interests, which is required for creating innovation and sponsoring change; and a business sense as a way of thinking (Macke, 2003:7).

Macke (2003:12) furthermore provides an illuminative view of entrepreneurial orientation and practice at schools, one that entrepreneurs can use to identify opportunity, assemble required sources, implement a practical action plan and harvest the rewards in a timely, flexible way. An entrepreneurial principal should master a basic set of skills that include recognising change and the opportunities and the threats these create, act proactively rather than reactively, harness his/her creative potential, understand the difference between an idea and an opportunity, develop effective plans, and understand the difference between forecasts and budgets.

As far back as the early nineties, Peck (1991:516) claims that there is, especially in the American school system, a desperate need for a system of entrepreneurial leadership. Many of the people in power in today's educational institutions were appointed to administer, not chosen to lead. They were not selected based on a rich set of ideas, nor based on their abilities to inspire creative thinking, to help groups define and implement a shared vision, or to identify and eliminate obstacles to innovation. Yet that, Peck (1991) argues, is what is needed. The education sector needs leadership, not administration or management. Levy (2005) agrees that the selection of a principal is usually based on subjective criteria rather than on defined leadership skills and characteristics.

Xaba and Malindi (2010:82) are of the opinion that there are different complexities and challenges of schools, such as higher demands for improving the quality of education in public schools, fast changes in the environment, and growing shortages in school resources and funds. Therefore, Pihie *et al.* (2014:3) believe that school principals require entrepreneurial leadership characteristics and the knowledge and competence to execute their tasks based on leadership principles.

Pihie *et al.* (2014:3) say that educators and researchers have looked at the benefits of entrepreneurship for school improvement in two ways. Firstly, entrepreneurship in general and entrepreneurial leadership in particular were considered as ways of thinking and ways of life, rather than merely establishing a new business (Kuratko, 2007; Klein &

Bullock, 2006; Hytti & O’Gorman, 2004). In this sense, entrepreneurial characteristics and approaches can be applied to improve all aspects of education and schooling, specifically school leadership through influencing individuals’ behaviour and their task performances (Berglund & Holmgren, 2006). Hamzah *et al.* (2009:536) stress that school principals need to acquire and practice entrepreneurial leadership characteristics in order to improve their school effectiveness and to facilitate the process of school innovation. Secondly, researchers in several studies have focused on the advantages of organisational entrepreneurship (Holt, Rutherford & Clohessy, 2007, Kuratko *et al.*, 2007; Gupta *et al.*, 2004; Swiercz & Lydon, 2002) for school organisation improvement.

In this context, Eyal and Inbar (2003:231) view organisational innovativeness as the capacity of a school to develop and implement novel ideas that lead to critical changes and improvements at the school. School innovativeness has three main components, including the capacity to explore new educational opportunities, the tendency to take action and exploit the opportunities and the changes that implemented innovations created from the school’s performances (Eyal & Inbar, 2003:230-231). Therefore entrepreneurship features are applied in schools to enhance their success in providing effective teaching and learning environments. Yemini, *et al.* (2015:536) explains that entrepreneurial school principals are able to shape and change institutions, despite pressures towards stasis and compliance (Battilana, Leca & Boxenbaum, 2009:96) that characterise centralised educational systems. According to Veciana and Urbano (2008:369), entrepreneurial school principals engage in an on-going process of responding to opportunities to lead change and to instil new norms or institutional structures in innovative ways that challenge existing arrangements or standardised practices. They engage in these processes within their existing institutional context, while gaining social legitimisation and support (Colomy, 1998:274).

Entrepreneurial leadership competencies, according to Pihie *et al.* (2014:3), in turn, help school leaders to face the complexities and constraints of the school environment, such as fast changes, limited resources, the variety of factors affecting school performance and the urgent need for preparing learners for their highly competitive future (Xaba &

Malindi, 2010:77; Eyal & Kark, 2004:212; Eyal & Inbar, 2003:222). These competencies also enable school leaders to create the dramatic changes and innovations required in public schools, by looking beyond the current status of the school and developing new opportunities for school improvement (Eyal & Kark, 2004:222).

In a study conducted by Borasi and Finnigan (2010:15-21) they list the entrepreneurial attitudes and behaviour that are successful change-agents in education employment:

- Driven by vision.
- Relentlessly engaging in innovation.
- Being alert and ready to seize opportunities.
- Not constrained by resources.
- Masters of networking.
- Making quick and timely decisions.
- Creative problem-solving.
- Confident risk-taking.
- Importance of being or finding a champion for each innovation.
- Capitalising on crises and dysfunction.

A study conducted by Yemini *et al.* (2015:535) revealed four related components of entrepreneurship in the school setting. Firstly, principals' entrepreneurship was found to be driven by particular values and visions that are important to them, which are then adopted by the school staff. Secondly, principals as entrepreneurs, never work alone. They engage the school staff and win over their support for the suggested ventures.

Thirdly, entrepreneurial principals are not hindered by funding constraints in implementing visions that they have dedicated themselves to. As such, they appear ready to take risks, which form the fourth component of entrepreneurialism among school principals.

Hamzah *et al.* (2009:542) are of the viewpoint that the characteristics of entrepreneurship will help the school in their search for opportunities as well as to strive independently to produce needed graduates for a country. This will enable the principal to achieve the determined vision, mission and goals, especially in ensuring the success of students, not only in academics, but also in character building, so that the educational field would be able to produce the needed human capital for the country. The results of the study by Hamzah *et al.* (2009) have shown that the entrepreneurship characteristics of principals are average and poor. It is suggested that the education of entrepreneurship is added to the preparation courses for principals so that they can be entrepreneurs who will always see opportunities and provide opportunities to the teachers and students of their respective schools.

3.5 THE STATE OF EDUCATION IN SOUTH AFRICA

Education is a basic human right that is enshrined in international and national laws. Alleviating poverty, improving health and addressing inequalities are all influenced by educational policy and practice. No country has ever reduced poverty without creating sustained economic growth, and education plays a critical role in generating productivity and accelerating this growth (SASIX, 2011).

The Education for All (EFA) movement is a global commitment to provide quality basic education for all children, youth and adults. The movement was launched at the World conference on Education for All in 1990 by UNESCO, UNDP, UNICEF and the World Bank. Participants endorsed an 'expanded vision of learning' and pledged to universalise primary education and massively reduce illiteracy by the end of the decade.

They identified six key educational goals which aim to meet the learning needs of all children, youth and adults by 2015 (UNESCO, 2015).

The six EFA goals that were set for 2015 are:

- To expand early childhood care and education.
- To ensure that all children, especially girls, complete free and compulsory, good quality education.
- To ensure equal access to learning and life-skills training for young people and adults.
- To achieve a 50% improvement in adult literacy rates.
- To achieve gender equity in primary and secondary education, and
- To improve the quality of education – especially in literacy, numeracy and life skills (UNESCO, 2015).

In the year 2000, in addition to the EFA goals, 147 heads of State and Government and 189 nations pledged to halve extreme poverty by the year 2105. The United Nations Development Programme identified the eight Millennium Development Goals (MDGs) listed below:

- Eradicate extreme poverty and hunger.
- Achieve universal primary education.
- Promote gender equality and empower women.
- Reduce child mortality.

- Improve maternal health.
- Combat HIV/AIDS, malaria and other diseases.
- Ensure environmental sustainability.
- Develop global partnerships for development (UNDP, 2015).

SASIX (2011) stresses how crucial education is for improving individual incomes, child and maternal health, and environmental sustainability. Its role goes beyond pure economic growth, by promoting social progress with well-documented links between education, public health and social issues. Its primacy is reflected in the commitment to achieve universal primary education in Goal 2 of the Millennium Development Goals (MDGs). In addition, education is part of MDG 1, which calls for the eradication of poverty and hunger, and MDG 3, which calls for the promotion of gender equity.

The Millennium Goals Report (United Nations, 2014) reported that disparities in primary school enrolment between boys and girls are being eliminated in all developing regions. Also, the enrolment rate in primary education in developing regions increased from 83% to 90% between 2000 and 2012. Most gains were achieved by 2007, after which it stagnated. In 2012, 58 million children dropped out of school. High dropout rates remain a major impediment to universal primary education (United Nations, 2014). According to SASIX (2011), achieving the EFA and MDG's goals is hampered by poor quality education, the high cost of schooling and persistently high adult illiteracy rates. Inequality remains the biggest obstacle. By the age of seven, almost all children in the Organisation for Economic Cooperation and Development (OECD) countries are enrolled in primary school, while the rate for sub-Saharan Africa is just 40%. Inequalities within the countries themselves are also apparent, as is the case in South Africa.

Spaull (2012:1) finds that South Africa still faces the reality of two different education systems, a dysfunctional schooling system (75% of schools) and a functional schooling

system (25% of schools), which are miles apart in their respective performance. Despite the high spending and many interventions which were made by the government over the past twenty years, the system remains virtually unchanged. The South African Government spends 20% of the total government expenditure on education, of which 78% goes to teacher salaries. Yet, the education system continues to propagate, rather than mitigate, inequality. If you are born into a family which is poor, your prospects for social mobility are very slim. Education is the main driver of social mobility, but the system continues to reproduce inequality, because there are so few good schools, which are also geographically and financially inaccessible to the poor.

Modidaotsile (2012:1-2) shows that despite the fact that South Africa has reached MDG2 and spends 18.5% of its annual budget on education, the education system remains largely in a poor state of affairs. The quality of education remains poor, and the output rate has not improved. The dropout rate is very high and literacy and numeracy levels are low. Other challenges include poor teacher training, unskilled teachers, a lack of commitment by teachers to teach, poor support for learners at home and a large shortage of resources in education, despite the large budgetary commitments by government.

SASIX (2011) finds that the lack of quality educators had a tremendous impact on the country's performance. Many of today's teachers were educated under the apartheid regime, and as a result did not experience quality education themselves. Without best practice and knowledge-sharing from experienced trainers to fall back on, the motivation, confidence and morale of teachers are low. This led to high levels of teacher absenteeism. Efforts to transform the educational system have largely been driven by government; without the *leadership* of educators themselves. A lack of *management* and *leadership* at schools are contributing factors to the challenges faced by the South African education system.

The *Global Competitiveness Report 2013-2014* (World Economic Forum, 2014) which assesses the competitiveness landscape of 148 economies, to provide insight into the drivers of their productivity and prosperity, ranks the South African educational system

as 146th out of the possible 148 countries. The South African government spends the equivalent of \$1225 per child on primary education, yet accomplishes less than the government of Kenya which spends only the equivalent of \$258 per child. The report ranks the quality of the educational system in Kenya as 44th out of 148. South African learners also perform badly in standardised global tests against South Africa's peers and other African countries. The organisation Education Moving Up, explains that some of the most underperforming schools in Singapore perform better than most of the top achieving schools in South Africa. Nel (2016) claims that money is seldom a problem in the South African system, the problem lies with the executing of current policies.

3.5.1 Comparative testing

Spaull (2013a:4) explains that the three main international tests of educational achievement that South Africa participates in are TIMSS, PIRLS and SACMEQ.

Human Sciences Research Council, HSRC (2012:2) explains that *The Trends in International Mathematics and Science Study (TIMSS)* is a cross-national assessment of the mathematics and science knowledge of fourth and eighth Grade learners, conducted by the International Association for the Evaluation of Educational Achievement (IEA) since 1995. It used results from achievement tests and questionnaires conducted with principals, teachers and learners to ascertain achievement scores and contextual factors relevant to achievement. A stratified sampling methodology was used in which schools were selected on the basis of province, the language of teaching and learning, and public or private status.

TIMSS was designed to align broadly with mathematics and science curricula in the participating countries. The results, therefore, can be used to determine the degree to which learners have acquired the mathematics and science concepts and skills likely to have been taught in school. The tests are constructed to measure achievement to help inform governments, policy makers and educators about the proficiency of their learners

at key points in the educational process. The findings from TIMSS provide an indication of the health of an education system (HSRC, 2012:2).

Spaull (2013a:4) indicates that the TIMSS study showed no improvement in Grade 8 mathematics or science between 1995 and 2002. Following this, it was decided that the international Grade 8 tests were too difficult for South African Grade 8 pupils, so that in 2002 both Grade 8 and Grade 9 pupils wrote the Grade 8 test, and in 2011 only Grade 9 pupils wrote the Grade 8 test. Comparing the performance of Grade 9 pupils between 2002 and 2011 indicated that there was a noticeable improvement in mathematics and science performance amounting to approximately one and a half grade levels of learning. This shows that there was some improvement over the period. While this is hopeful, it is difficult to celebrate, taking into consideration how low the post-improvement level of performance really is. Part of the reason for the improvement is the fact that South Africa started from an exceedingly low base in 2002. To place this into perspective, Nkozi (2012) explains that South Africa's post-improvement level of performance is still the lowest of all participating countries, with the average South African Grade 9 child performing between two and three grade levels lower than the average Grade 8 child from other middle-income countries. Rural schools with the lowest resources achieved lower scores while former Model C schools were the best performers.

SACMEQ 2000 and 2007 – Southern and Eastern African Consortium for Monitoring Educational Quality (Grade 6 numeracy and literacy)

SACMEQ II (2000) and SACMEQ III (2007) showed that there was no improvement in South African Grade 6 literacy or numeracy performance over the seven year period. Given that 13 other African countries also participated, it is possible to compare the achievement levels of South African Grade 6 children with other Grade 6 children on the continent. In the most recent round of SACMEQ (2007) (Department of Basic Education, 2010), South African pupils ranked 10th of the 14 education systems for reading, and 8th for mathematics, behind much poorer countries such as Tanzania,

Kenya and Swaziland. According to Spaul (2013a:4), the study found that 27% of South African Grade 6 pupils were illiterate, since they could not read a short and simple text and extract meaning, with the proportion varying significantly by province: half (49%) of all Grade 6 pupils in Limpopo were illiterate, while only 5% of pupils in the Western Cape were thus classified.

Howie, Van Staden, Tshele, Dowse and Zimmerman (2011) explain that *The Progress in International Reading Literacy Study (PIRLS)* is an international assessment, administered every five years, that measures trends in students' reading literacy achievement and policy and practices related to literacy. This study is carried out under the auspices of the International Association for the Evaluation of Educational Achievement (IEA), a consortium of research institutions in 60 countries. The first PIRLS assessment took place in 2001.

The PIRLS SA report (2011:xvi) indicates that in 2011 South African Grade 4 learners achieved well below the international centre point, despite writing an easier assessment. They were still performing at a low level overall on an easier assessment, compared to their counterparts internationally. A few South African learners (6%) were able to read at an advanced level, although 71% were able to reach a rudimentary level of reading and attain the low international benchmark. For Grade 5 learners there was no difference between the overall achievements of South African learners in 2011, compared to that of 2006. Grade 5 learners tested in Afrikaans and English were still performing below the international average score for reading literacy of Grade 4 learners internationally.

Another significant result of the report highlights the important role of the school in compensating for minimal home opportunities offered to children from low socio-economic backgrounds. Schools can only compensate if they are adequately resourced and well-managed. PIRLS SA (2011:xviii) reveals strong negative relationships to achievement where schools are *not well-managed*, or well-resourced.

3.5.2 Intervention

During 2010 the Minister of Basic Education, Mrs. Angie Motshekga, announced an improvement plan for schools in South Africa called the Action Plan to 2014, and that this would form part of a larger vision called *Schooling 2025*. This plan is in many ways the country's first comprehensive long-term sector plan for schools. It has a long-term focus, stretching to 2025, as expressed in the 'Schooling 2025' notion. However, it is also an 'action plan' with a relatively detailed account of what needs to be done within the electoral cycle up to 2014 (Department of Basic Education, 2011). The main focus of the Action Plan is aimed at the almost 25 000 schools, known as public ordinary schools. This strong focus is based on both the magnitude of this subsector and the especially serious nature of the challenges these schools are facing.

The Action Plan explains the 27 national goals that lie at the heart of the plan. Thirteen of these goals are output goals, dealing with better school results and better enrolment of learners in schools. The remaining 14 goals deal with the 'how' of improving schooling (Department of Basic Education, 2012:4).

The Department of Basic Education commissioned a School Monitoring Survey of ordinary public schools to monitor progress towards the achievement of some of the goals and indicators set out in the *Action Plan to 2014: Towards the Realisation of Schooling 2025* (Department of Education, 2011:235) and the *Delivery Agreement* between the President of South Africa, the Minister of Basic Education, Members of Executive Committee, government departments and other stakeholders (The Presidency, 2010: 1-4). This *Action Plan to 2014* was published in 2011, containing a built-in monitoring component through its indicators and targets.

For 14 of the 15 indicators, the *minimum standards* for the indicators were not met:

- A total of 69% of all schools met the requirement that one hundred percent of all state-paid posts must be filled.

- Educators only spend an average of 38.1 hours on professional development activities, out of the expected 80 hours per year.
- Nationally, 6.1% of educators were absent on an average day.
- The minimum required standard to measure the volume of work covered was set at four exercises a week for both Grade 6 and Grade 9, in both language and mathematics. Only 7% of Grade 6 learners met this requirement for language and 31% for mathematics.
- In Grade 6, 100% of all learners should have access to the DBE Workbooks Volume 1 and Volume 2, for both language and mathematics. In Grade 6 and 9, 100% of all learners should also have access to a textbook for both language and mathematics. A total of 78% of Grade 6 learners had access to a language textbook, 38% to a language workbook, 83% to a mathematics textbook while 85% had access to the mathematics workbook.
- Only 30% of schools met the requirement to have a minimum set of specified management documents in place, at a required standard.
- A total of 48% of schools had a School Governing Body that met the minimum criteria for effectiveness in terms of correctly constituted membership, minutes of every meeting, various policies, audited financial statements and the minimum prescribed number of meetings.
- Nationally, only 47% of learners were in schools that were funded according to the minimum national levels.
- In total 74% of schools met the requirement to have been allocated all three the Section 21 functions as stipulated in the South African Schools Act (i.e. Sections 21a, 21c and 21d) to meet the standard.

- Only 55% of the schools met the requirement of the minimum standard of physical infrastructure: running water; working electricity; fenced school premises; separate toilets for boy and girl learners; and separate toilets for teachers.
- Every quintile, 1 to 3 schools have a National School Nutrition Programme (NSNP) through which the learners receive a nutritious meal five times a week, or every school day. Only 86 % of learners received a nutritious meal every school day.
- Only 70% of schools met the requirement to have at least one educator who has received specialised training in the identification and support of special needs.
- 87 % of all schools have received at least two visits from a district official for monitoring or support purposes during the year.
- A total of 34% of principals rated 50% or more of the district support services as satisfactory (Department of Basic Education, 2013:7–12).

3.5.3 Annual National Assessment

The Department of Basic Education (2013:2) stresses that the Annual National Assessment (ANA) is a critical measure for monitoring progress in learner achievement, as outlined in the Education Sector Plan, *Action Plan to 2014: Towards the Realisation of Schooling 2025*. The target of the plan is to ensure that at least 60% of learners achieve acceptable levels in literacy and numeracy. In keeping with the international norm of large scale assessment, the ANA has a particular focus on assessing mathematics and language competencies, which are regarded as the foundational skills for furthering learning and teaching.

For the purpose of this study, emphasis is placed on the ANA as it is the only national measure of performance for learners from Grade 1–9.

In 2014, the overall results for ANA for Grades 1-6, pointed towards an upward movement in test scores, while in Grade 9 mathematics, the performance of learners has remained at a low level, as was the case in 2012 and 2013. Over the last three years, the analysis of provincial trends in the ANA indicates that the educational sector is making strides in the foundation and intermediate phases in both languages and mathematics. In the summary tables below, the average national percentages that learners achieved in mathematics and language are indicated.

Table 3.1 Summary table for mathematics in 2012, 2013 and 2014

Grade	MATHEMATICS AVERAGE PERCENTAGE MARK		
	2012	2013	2014
1	68	60	68
2	57	59	62
3	41	53	56
4	37	37	37
5	30	33	37
6	27	39	43
9	13	14	11

Source: Department of Basic Education (2014:9)

Table 3.2 Summary table for home language in 2012, 2013 and 2014

Grade	HOME LANGUAGE AVERAGE PERCENTAGE MARK		
	2012	2013	2014
1	58	61	63
2	55	57	61
3	52	51	56
4	43	49	57
5	40	46	57
6	43	59	63
9	43	43	48

Source: Department of Basic Education (2014:9)

Table 3.3 Summary table for first additional language in 2012, 2013 and 2014

Grade	FIRST ADDITIONAL LANGUAGE AVERAGE PERCENTAGE MARK		
	2012	2013	2014
4	34	39	41
5	30	37	47
6	36	46	45
9	35	33	34

Source: Department of Basic Education (2014:9)

The ANA-Report of 2014 also contains valuable information on provincial performance. The results suggest that in the foundation phase, there are noteworthy increases across all provinces in the overall scores for languages and mathematics (Department of Basic Education, 2014). In Gauteng, for example the average percentage mark is above 60%

across Grades 1 to 3 in both subjects. In the intermediate phase, learners in Grade 6 perform well in home languages, and across all provinces the achievement level is above 50%. At a national level, Grade 6 shows a 4% increase in the performance of learners for home languages and mathematics. However, learner performance for the first additional level across all grades remains on the lower side.

In the senior phase, the sector is challenged for not delivering the expected progress against targets set by the Department of Basic Education in 2010. In particular, performance in Grade 9 mathematics does not show any improvement. Across all provinces, the performance of learners has dropped a few percentage points. In home language, at Grade 9 level, there has been an improvement in learner performance, but the national performance is below 50%. The trends in learner performance at district level are similar to what is observed at the provincial level. In Grade 9 mathematics there has been a drop in performance in almost all districts. For Grade 9 home language, the district level scores range from 31% to 59%. In Grade 9, first additional language, scores range from 28% to 42%.

The overarching goal, as per the injunction of the President of the Republic of South Africa, in the State of the Nation Address of 2010, was that by 2014, at least 60% of all learners in Grades 3, 6 and 9 should have achieved acceptable levels of competency in language and mathematics. In the ANA-report a 50% or higher test score is regarded as an acceptable level of competency. This is aligned with CAPS (Curriculum and Assessment Policy Statement) where a mark of at least 50% is required for adequate and higher achievement (The Presidency, 2010:1-4).

The percentages of Grade 3, 6 and 9 learners who obtained acceptable achievements (50% or more) in the mathematics, home language and first additional language tests in 2012, 2013 and 2014 are reported in the summary tables below.

Table 3.4 Percentage of learners obtaining at least 50% of the mathematics marks

Grade	PERCENTAGE OF LEARNERS ACHIEVING 50% OR MORE FOR MATHEMATICS		
	2012	2013	2014
3	36	59	65
6	11	27	35
9	2	2	3

Source: Department of Basic Education (2014:10)

Table 3.5 Percentage of learners obtaining at least 50% of the home language marks

Grade	PERCENTAGE OF LEARNERS ACHIEVING 50% OR MORE FOR HOME LANGUAGE		
	2012	2013	2014
3	57	57	66
6	39	68	77
9	39	37	48

Source: Department of Basic Education (2014:10)

Table 3.6 Percentage of learners obtaining at least 50% of the first additional language marks

Grade	PERCENTAGE OF LEARNERS ACHIEVING 50% OR MORE FOR FIRST ADDITIONAL LANGUAGE		
	2012	2013	2014
6	24	41	42
9	21	17	18

Source: Department of Basic Education (2014:10)

The tables above indicate that substantial increases in the percentage of learners reaching acceptable achievement levels can be observed for mathematics in Grades 3 and 6. For Grade 3, the target of 60% that was set in the *Action Plan to 2014* has been achieved in both mathematics and home language. In Grade 6 there has been a large increase in the percentage of learners achieving acceptable achievement levels, for both mathematics and home language, but the target has not been achieved in mathematics. In Grade 9, achievement is still well below the target, even though there was an increase in the percentage of learners reaching acceptable levels in home language.

Spaull (2013b) stresses that it is important to note that the National School for Effectiveness Study (2011c) found that Grade 3 learners scored an average of 29% for numeracy on a Grade 3-level test. If South Africa improved at the fastest rate ever seen globally (which is 0.08 standard deviations a year), the score in 2013 would have been around 38% for Grade 3 – not the 53% that was reported. The 2012 ANA result was 41%, thus an improvement of 12% in 2013.

In an evaluation of Title I school choice and supplemental educational services, conducted as part of the National Longitudinal Study of No Child Left Behind (United States of America), Zimmer, Gill, Razquin, Booker and Lockwood (2007:xiv) found positive effects averaging 0.08 of a standard deviation unit in both reading and mathematics for students participating in supplemental services for the first time. The

effect was cumulative when students participated in supplemental services multiple times (over two or more years), with effect sizes growing to 0.15 and 0.17 of a standard deviation for reading and mathematics, respectively.

Prior to the implementation of the Annual National Assessments in 2011, there was no standardised, national examination at any level, other than Grade 12. According to Lam, Ardington and Leibbrandt (2011:4), a comparison of continuous assessment school-based marks, in conjunction with externally evaluated matriculation examination marks, provides direct evidence of the poor quality of internal assessment in many schools. Most schools were found to have average internal assessments that exceeded their average external matric results. This gap was the greatest among those schools with the poorest matric results. These low-performing schools also had the highest variance in their internal assessments (Van den Berg & Shepherd, 2010:3).

In 2013, the Department of Basic Education procured the services of a consortium of service providers to independently monitor the administration of tests, administer background questionnaires, mark tests, capture data, conduct analyses and report on results for a selected sample of learners in Grades 3, 6 and 9 in schools across the country (Department of Basic Education, 2013a:26). At a large majority of schools though, ANA is both administered and marked locally. This leaves the system open to various forms of cheating and lenient marking, which would diminish the information value of ANA. The "Verification ANA" should provide a rough indication of the extent to which such practices are occurring. In the ANA report (2011), the Department noted such a discrepancy: "The high average scores in Grade 3 in the case of the Eastern Cape in ANA suggest that different standards were applicable in these tests and in this province" (Department of Basic Education, 2011b:20). In view of this potential weakness the "Delivery Agreement" recognises that it is crucial for ANA to become comparable across schools and provinces and over time. In at least one primary school grade, ANA should be externally administered and marked to ensure that there is at least one reliable system-wide measure of quality for all primary schools. Within schools, this would also serve to provide some indication of possible inaccurate or lenient marking of

ANA at other grade levels. An independent, reliable and public evaluation of learner performance early on in the schooling process will be an important step in improving the quality of primary schooling in the country.

There is, as seen in the table and figure below, a large discrepancy between the verified and unverified ANA results, but the National Department still uses the unverified results as the standard. The ANA report completely ignores these differences and rather focuses on the higher unverified scores (Department of Basic Education, 2013:42).

Table 3.7 Achievement in Grade 3 language by province in 2012 and 2013

Province	AVERAGE MARK %			ACCEPTABLE ACHIEVEMENT		
	2012	2013	VERIFICATION	2012	2013	VERIFICATION
Eastern Cape	50.3	47	34.7	52.7	50.2	27.0
Free State	56.3	54.4	47.5	65.2	65.7	49.7
Gauteng	54.8	54.5	47.5	61.7	63.1	49.4
KwaZulu-Natal	53.5	55.3	45.3	59.2	64.5	45.2
Limpopo	47.9	46.9	37.2	48.8	49.9	30.0
Mpumalanga	48	47	38.8	48.9	51.4	35.3
Northern Cape	49.4	46.2	36.6	51.4	48.6	29.4
North West	46.4	46.8	37.2	46.3	50.1	31.3
Western Cape	57.1	49.9	48.6	67.4	54.9	53.0
National	52	50.8	42	56.6	57	39.7

Source: Department of Basic Education (2013:42)

3.5.3.1 Opposition against Annual National Assessment

The Annual National Assessments are intended to give teachers and parents an accurate indication of how pupils fare at school, as well as to allow for better intervention in earlier grades, by recognising that basic literacy and numeracy are critical to performance in the final years of basic education. At their national congresses this year, the South African Democratic Teachers Union (SADTU) and the National Professional Teachers Organisation of SA (NAPTOSA), decided to maintain pressure on the Department of Basic Education to not extend the scope of the testing (SADTU, 2014; Gernetsky, 2014). NAPTOSA recognises that the push for standardised testing is an international one, but there is growing concern in SA that the "pendulum has swung too far". According to NAPTOSA, the Department of Basic Education needs to reconsider the time and effect of these tests against the innate value that we extract from them. Teachers complain they spend too much time teaching how to do the tests rather than teaching the curriculum. According to SADTU, the tests are abused to label teachers and schools, demoralising and de-professionalising them. In a rare occurrence, the official opposition in South Africa, the Democratic Alliance (DA), agrees with the assertion made by SADTU that the Annual National Assessments are not working. They have the same opinion that these literacy and numeracy tests cause learners and teachers to focus their efforts on maximising test scores, which result in teachers 'teaching to the test'. They concur that the ANA is not used as it should be, namely as a diagnostic tool, uncovering the precise areas of learning struggles, and as a platform for the development of strategies to address shortcomings (Democratic Alliance, 2014).

The Democratic Alliance (2014) noticed that the Grade 12 pass rate in 2013 was 78.2%. However, when learners in Grade 9 were assessed through the Annual National Assessments in 2013, it became clear that only 37% were considered literate and only 3% numerate. The system is under suspicion; which of the two assessments is the most reliable? An improvement of such a nature in a mere three-year span seems impossible, especially seen in the light of the poor performing system.

Spaull (2013a:8) states that although the Annual National Assessments are one of the most important and needed policy innovations since the transition to democracy, given the way that these tests are currently implemented – including the formulation, marking, invigilation and moderation procedures – they cannot be used as a reliable indicator of progress.

In December 2015, in a joint action against the Department of Basic Education, The South African Democratic Teachers Union (SADTU), National Professional Teachers Organisation of South Africa (NAPTOSA), National Teachers Union (NATU), Professional Educators Union (PEU) and the Suid-Afrikaanse Onderwysersunie (SAOU), decided to boycott the ANAs in an “educationally accountable” attempt to force the Department of Basic Education to reflect and to make the necessary adjustments to the assessment tool (SAOU, 2015).

3.5.4 National Senior Certificate Examination (NSC)

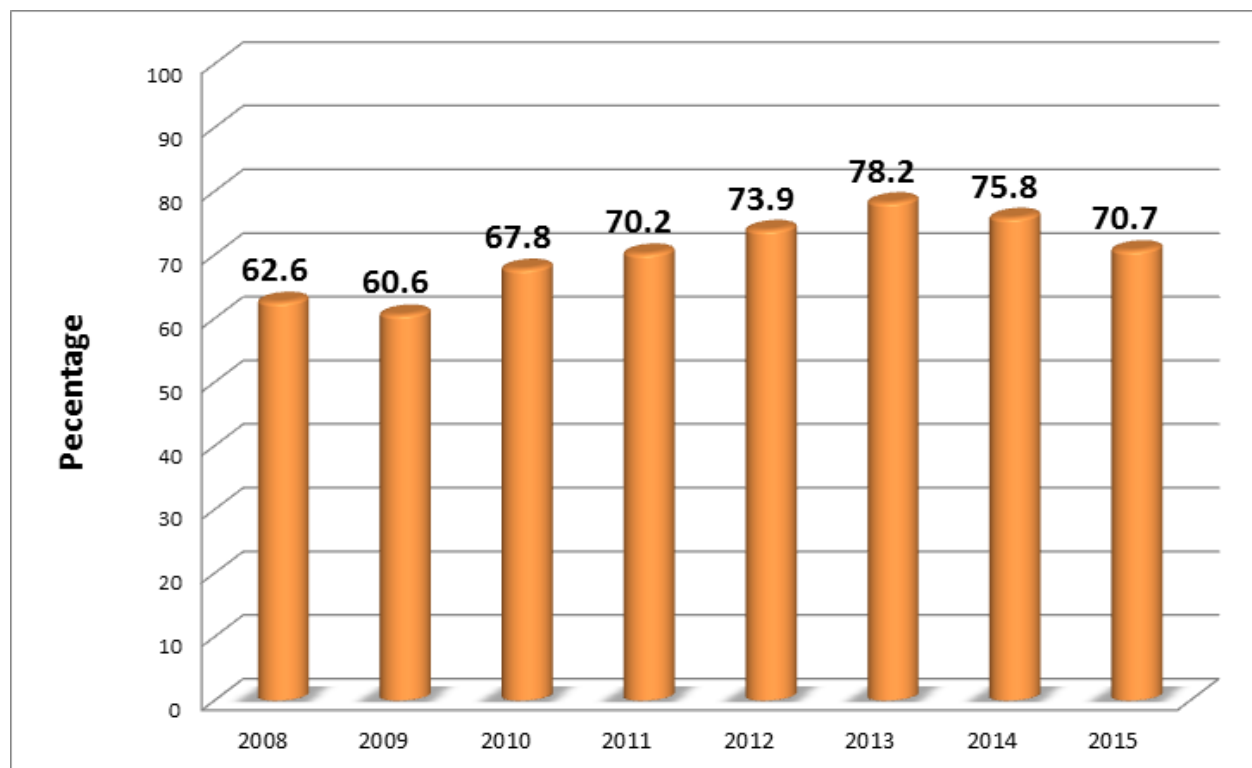
The Department of Basic Education (2015:16) stresses that the attainment of quality education for the population at large, particularly the youth, has been a national priority since the advent of democracy in South Africa. The National Senior Certificate and the Annual National Assessments are vital in terms of measuring the progress in achieving the set targets as outlined in the Action Plan to 2019: Towards Realisation of Schooling 2030, and the National Development Plan. The following three targets are directly measured through performance in the National Senior Certificate:

- Increase the number of Grade 12 learners who become eligible for a Bachelor programme at a university.
- Increase the number of Grade 12 learners who pass mathematics.
- Increase the number of learners who pass physical science (Department of Basic Education, 2015:16).

The Class of 2015 recorded the highest enrolment of Grade 12 learners in the history of education in South Africa. The total number of candidates who registered for the November 2015 examinations were 799 306; written by 667 925 full-time candidates and 131 381 part-time candidates. Of the full-time candidates who wrote the examination, 455 825 candidates attained the National Senior Certificate, which constitutes a 70.7% pass rate (Department of Basic Education, 2016:10). The pass rate was 53% in 1994, 61% in 2009 and 78.2% in 2013 (Department of Basic Education, 2015:16).

The Western Cape (84.7%) and Gauteng (84.2%) Province had the highest Grade 12 pass rates in 2015, followed by Free State (81.6%) and North West (81.5%). KwaZulu-Natal (60.7%) and Eastern Cape (56.8%) were at the bottom (Department of Basic Education, 2016:10). However, only considering the pass rates can give a misleading picture of the state of education in these provinces, and indeed, the country.

Figure 3.2 Comparison of NSC performance: 2008-2015



Source: Department of Basic Education (2016:42)

Motshega, Minister of Basic Education, explains that though the achievement rate decreased from 75.8% in 2014 to 70.7% in 2014, there has been a significant increase in the number of learners achieving the NSC. The number of learners have increased from 403 874 in 2014 to 455 825 learners achieving a NSC pass in 2015, which is an increase of 51 951 learners (Department of Basic Education, 2016:3(a)).

The Department of Basic Education (2016:11(b)) highlights that the number of learners passing mathematics has increased from 120 523 in 2014 to 129 481 in 2015; the number of learners passing physical science has increased from 103 348 in 2014 to 113 121 in 2015; a total of 25.8% of these learners qualified for Bachelor studies at Higher Education Institutions; 38.8% of schools attained a pass percentage of 80% and above; 6.9% of schools attained a pass percentage of 100%; and 463 schools from quintile 1 attained a pass percentage of 80% and above (7.5%). All South African public ordinary schools are categorised into five groups, called quintiles, largely for purposes of the allocation of financial resources. Quintile one is the 'poorest' quintile, while quintile five is the 'least poor'. These poverty rankings are determined nationally according to the poverty of the community around the school, as well as certain infrastructural factors. Schools in quintile 1, 2 and 3 have been declared no-fee schools, while schools in quintiles 4 and 5 are fee-paying schools (Western Cape Department of Education, 2013). It is important to note that the two top performing provinces, Western Cape and Gauteng, have the lowest percentage of quintile 1 schools. More significantly, they also have the highest percentage of schools in quintiles 4 and 5 (Western Cape Department of Education, 2013).

The Umalusi Council sets and monitors standards for general and further education and training in South Africa in accordance with the National Qualifications Framework Act No 67 of 2008 and the General and Further Education and Training Quality Assurance Act No 58 of 2001. The Council is tasked with the development and management of a sub-framework of qualifications for general and further education and training, as well

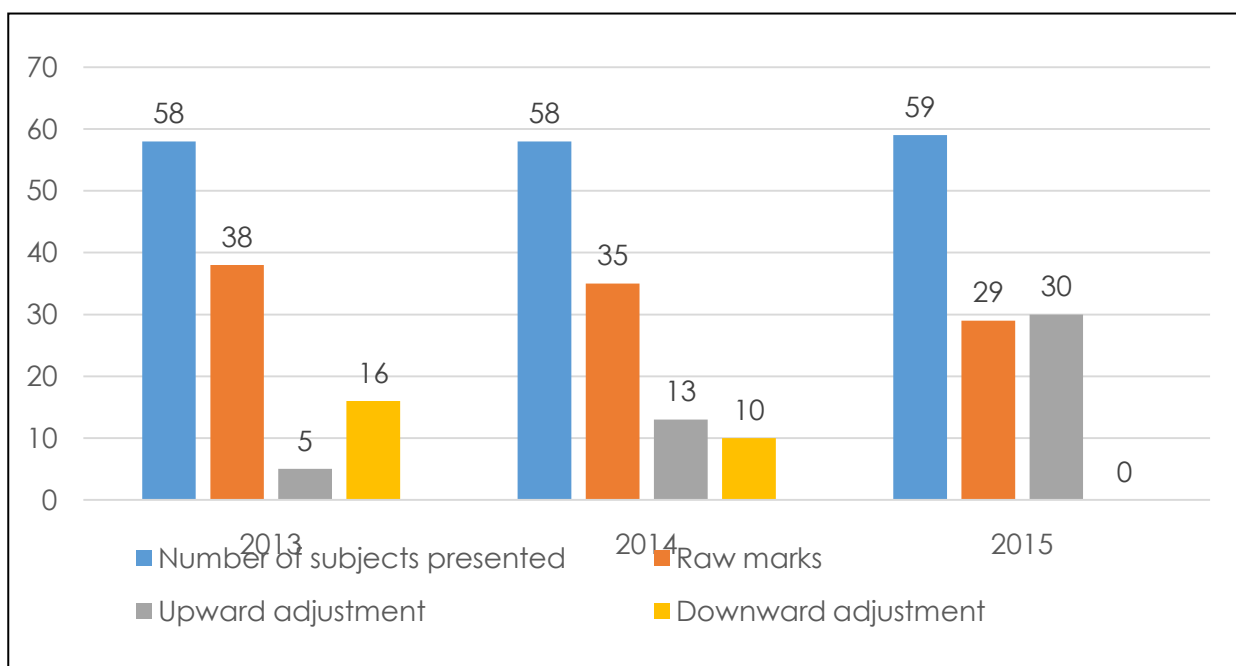
as for attendant quality assurance. In schools, Umalusi is responsible for the certification of the Senior Certificate (SC) - continuing as a revised qualification for adults, and the National Senior Certificate (NSC), which replaced the SC in 2008 (Umalusi, 2015).

Umalusi (2015) explains that a total of **59** subjects were presented for standardisation. After moderation, raw marks were accepted for **29** of these subjects. This figure represents **49%** of the subjects. Moderation with some upward shifts towards the average historical learner performance profile was effected for the remaining 30 (13 in 2014) of the subjects. In 2014 moderation with some **downward shifts** towards the average historical learner performance profile was effected for **10** subjects. It is therefore clear that to warrant this year's unprecedented set of adjustments, the learner performance in 2015 must have departed quite significantly from the average historical learner performance profile.

Rakometsi, the CEO of Umalusi, pointed out that there was a drastic increase of 124 105 in the enrolment of candidates for the Class of 2015, of which over 66 088 were progressed learners (10% of the total cohort). The analysis of Umalusi, based on the raw scores of the 2015 results, demonstrates that the performance of progressed learners account for an increase in the failure rate of at most 3.5%. In most of the high-enrolment subjects, the increased failure rate compared to 2014 exceeds 3.5%. In other words, if we exclude the progressed learners, the class of 2015 still performed worse than the class of 2014. The drop in performance is particularly pronounced in the following subjects: accounting, geography, history and mathematical literacy (Umalusi, 2015).

Swanepoel (2016) notices the marks in a number of subjects were adjusted by up to 10%. This resulted in an increase in the pass rate of between 9% and 15%. More than 70 000 learners passed, who should have failed before the adjustments. Swanepoel (2016) stresses that the report of Umalusi shows that the pass rate for 2015 is 60% against the 70.1% that was announced by the Minister of Basic Education.

Figure 3.3: Analysis of the DBE 2015 NSC results: Standardisation decisions (2013/14/15)



Source: Umalusi (2016)

Table 3.8: Pass rates based on raw and adjusted marks 2013/14/15

		PROVINCE									
	Year	WC	NC	FS	EC	KZN	MP	LP	GP	NW	NAT
Raw mark	2013	87.0	77.4	89.2	67.6	79.5	80.1	74.9	88.6	89.6	80.5%
Adjusted	2013	85.0	74.5	87.3	64.9	77.3	77.6	71.7	86.9	87.2	78.2%
Raw	2014	77.5	70.8	78.1	60.9	64.8	73.9	68.3	80.3	80.3	71.1%
Adjusted	2014	82.2	76.3	82.8	65.4	69.7	79.0	72.8	84.7	82.6	75.8%
Raw	2015	75.3	54.4	71.6	45.8	51.2	66.9	53.2	74.6	68.4	60.0%
Adjusted	2015	84.6	69.3	81.9	56.8	60.7	78.5	65.9	84.2	81.4	70.7%

Source: Umalusi (2016)

3.5.5 Drop-out rate

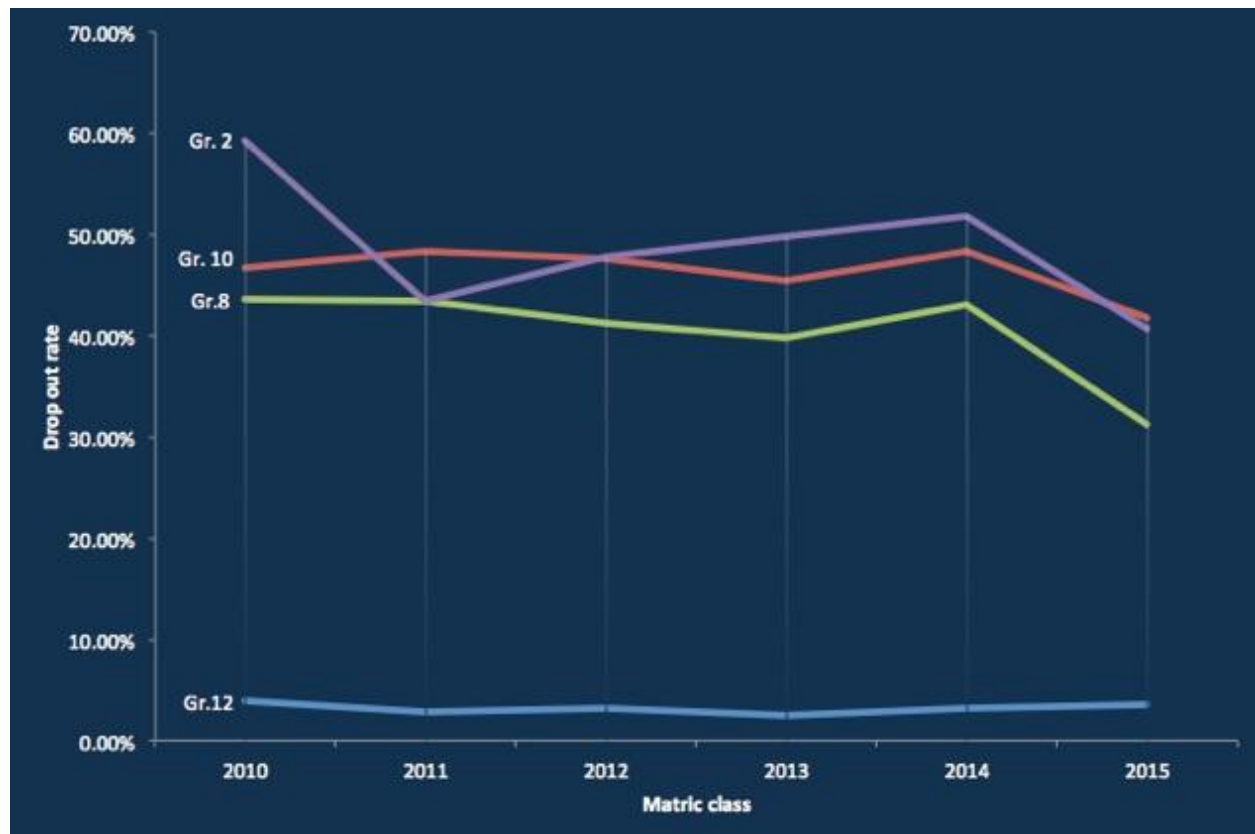
Equal Education (2016:2) warns that the drop-out rate continues to be excessively high, currently (2016) near 40% (an improvement of 10% from 2015), meaning that almost half of all learners do not reach Grade 12. For perspective on the pass rate, it is useful to take into account the serious drop-out rates (Table 3.9 & Figure 3.4). Starting in Grade 2, six cohorts (2010-2015) can be identified and can be tracked over a 10-year span. Approximately half of each cohort drops out before even reaching Grade 12. Looking at the number of learners who wrote the NSC, a 'cohort Grade 12 pass rate' can be created. The 75.8% pass rate of 2014 is now closer to a 36.41% pass rate, and the 70.7% of 2015 is actually closer to 40.74%.

Table 3.9 Drop-out rates from Grade 10 to 12

Year	Grade 2 enrolment (2000, 2001, 2002, 2003, 2004)	Grade 10 enrolment (2000, 2001, 2002, 2003, 2004)	Grade 12 enrolment (2000, 2001, 2002, 2003, 2004)	Percentage drop Grade 10-12
2010	1 090 765	1 076 527	579 384	50.07%
2011	944 977	1 017 341	534 498	51.24%
2012	1 012 892	1 039 762	551 837	50.84%
2013	1 111 858	1 094 189	576 490	48.63%
2014	1 109 201	1 103 495	550 127	51.71%
2015	1 118 690	1 146 285	668 122	41.71%

Source: Equal Education, 2016:2

Figure 3.4: Drop-out rates of South African learners (2013/14/15)



Source: Equal Education (2016)

3.5.6 Committed workforce

Reddy *et al.* (2010:1) explain that governments and societies around the world recognise the importance of education for development and have invested in education in their countries. One of the key elements for the provision of a quality education is a committed and qualified teaching force. In addition to qualifications and commitments, educators need to be present in a classroom.

Basic Education Minister, Motshega, explains that truant educators were absent for close to 7.5 million days in 2012. There is a concern in the Department of Basic Education about teacher accountability (Spaull, 2013a:1). Reddy *et al.* (2010:1) state that educators are important for the educational successes of learners; they provide

expert knowledge inputs. The matter becomes especially important in low-income countries where the classroom inputs cannot be compensated by inputs from home. Thus, educator presence in a classroom is critical to produce the desired learning outcomes.

Masondo (2016) indicates that after the announcement of the 2015 NCS-results, Basic Education Minister Motshekga described parts of the South African education system as a "national catastrophe" and "crisis" and consequently called for:

- The immediate dismissal of underperforming principals and district directors, who should be made to face the consequences of their actions; and
- Action against teachers in "former African schools" who, allegedly teach for only 3.5 hours a day, in comparison with the 6.5 hours taught by those in former Model C schools.

Teachers in former African schools teach an average of 3.5 hours a day compared to 6.5 hours a day for former Model C schools. This amounts to a difference of three years of schooling. Put differently, the majority of children in our system are expected to compete at the same level with privileged learners, despite the deficit of three years of schooling lost through nothing but sheer ineptitude. A 2012 study of North West teachers found that teachers taught only 40% of the scheduled lessons, while a study conducted in 2010 by the HSRC found that almost 20% of teachers were absent on Mondays and Fridays (Masondo, 2016).

Nel (2016) indicates that the South African school system was developed to accommodate 170 school days per year (actual teaching days). The latest research shows that teachers only teach effectively for 82 days per year.

Reddy *et al.* (2010:1) notice that there is a concern about quality education provision in South Africa. There are many reasons postulated for the low quality – one of which

relates to time spent on teaching and learning activities, and in particular, to time spent on tasks, as well as educator and learner attendance in schools. Both President Zuma's State of the Nation Address (2009) and the Development Bank of Southern Africa's Education Road Map (2008), refer to the concerns relating to educators and learners being in school and in class.

3.5.7 Policy on the South African Standard for Principalship

In 2015 the Department of Basic Education (DBE) introduced the Policy on the South African Standards for Principalship (Department of Basic education, 2015). The DBE believes that it is imperative to establish a clear and agreed understanding of what the South African education system expects of those who are, or aspire to be, entrusted with the leadership and management of schools. Currently, no common or universally accepted understanding exists. Therefore, the DBE has developed the Policy on the South African Standard for Principalship, which fully defines the role of school principals and the key aspects of professionalism, image and competencies required. This will also serve as a policy to address professional leadership and management development needs. According to the Federation for School Governing Bodies (2016), this is an important milestone for education in South Africa.

The Department of Basic Education (2016) explains that the Department intends to build upon the quality of leadership and successful outcomes observed at well-functioning schools within the context of their communities, and to address poor leadership and inadequate outcomes of schooling at other schools. It has explicitly stated its belief that effective leadership and management, supported by a well-conceived, needs-driven development of leadership and management, is critical to the achievement of its transformational goals for education. The purpose of the transformation of any education system is to bring about sustainable school improvement and a profound change in the culture and practice of schools. In South Africa, this change is influenced by the many complex economic, political, social, and health factors which affect widely differing communities in both urban and rural contexts.

These factors, and particularly the widespread, devastating impact of HIV and Aids, make it vitally important for schools to provide for the overall well-being of their learning communities in a nurturing and supportive environment. The extent to which schools are able to provide such support, and implement the necessary change and improvement, will depend on the professionalism of their leaders and the quality of the leadership and management that those leaders provide.

3.5.8 Classification of schools

Macupe (2016) reports, that the Gauteng Department of Education is moving away from categorising schools according to social class. As from 2016, schools will be classified according to performance. The provincial department's new classification system will have four categories: poor, fair, good and great.

Nel (2016) indicates that schools which are categorised as great will be those whose pass rates are between 81% and 100%, good will be 61% to 80%, fair 41% to 60%, and poor 0% to 40%. The department used Grade 12 pass rates, mathematics and science pass rates, and Bachelor passes to categorise high schools. Results show that 41% of Gauteng's high schools are fair, while 25% are poor, 22% are good and only 12% are great. The top schools will be categorised for parents to make an informed decision whether they want to enrol a child at a specific school or not.

Macupe (2016) explains that when categorising primary schools, the Department will use the 2014 Annual National Assessment results. Most primary schools in the province are fair at 52%. Only five primary schools are great, 28% are poor and 20% are good.

3.5.9 Challenges

Prew (2009) is of the viewpoint that South Africa has a high-cost, low-performing education system that does not compare favourably with education systems in other African countries, or in similar developing countries. There are a multitude of well-

published problems, including a shortage of teachers, under-qualified teachers, and poor teacher performance. In the classroom, this results in poor learner standards, results, a lack of classroom discipline, and is exacerbated by insufficient resources and inadequate infrastructure. On government level, difficulties have been caused by a failure of appropriate inspection and monitoring, and confusion caused by changing curricula without proper communication and training. All this has led to massive demoralisation and disillusionment among teachers and a negative and worsening perception of the teaching profession.

For over 50 years, apartheid education was deliberately designed to privilege whites and disadvantage black South Africans. More than 20 years after the end of apartheid, with South Africa having one of the highest budget spending on education in the world (20% of the GDP), the South African education system still propagates the inequalities of the apartheid era. Gaza (2012) stresses that the critical element to understand, is that history alone is not the only reason why South Africa's education system is in a crisis.

Gaza (2012) highlights the biggest challenges facing South African education:

- Children leave school illiterate and innumerate.
- South African learners do not have a culture of reading and a lack of motivational push to learn from their communities and families. A 2012 study published by the University of Stellenbosch found that while 71% of children in Grade 6 were functionally literate, only 58.6% could be considered functionally numerate (Spaull & Taylor, 2012:12).
- South African teachers do not have the basic pedagogic and content knowledge competencies necessary to impart the skills needed by our learners.
- Resources are used in non-efficient manners, with little accountability and transparency.

- Inadequate organisational support to teachers and bureaucracy from the educational department.
- Constant shifts in South Africa's educational curriculum.
- Failure of the Education Department to deliver core responsibilities.
- Power dynamics at play between a seemingly all-powerful teachers' union (SADTU) and the State. Taylor (2011:4) claims that a good principal can make an enormous difference in the quality of teaching and learning, when compared to an ineffective principal working under the same socio-economic and cultural conditions.

Taylor (2011:4) warns that institutionalised nepotism undermines the use of expertise as the main criterion in the recruitment and promotion of teachers, principals, and system level officials. It has become clear that in many parts of the country, appointments to all positions in the school system are subject to union regulation. The result is widespread nepotism, which is destructive in two ways. Firstly, it results in inappropriate people being appointed to positions for which they are ill-equipped - under these conditions, institutional dysfunctionality becomes the norm. Secondly, and far more important, the distribution of opportunity by patronage signals that expertise is irrelevant and its development and deployment is not the way to get ahead; instead, the livelihood of teachers and principals depends on the cultivation of networks held together by unions and political and civic associations.

In 2014 another scandal hit the South African education system. It was found that SADTU sold promotional and management positions to members, which has a serious impact on the quality of educational leadership (Harper & Masondo, 2014).

- Lack of basic amenities, infrastructure and learning resources in South African townships and rural schools. The Department of Basic Education's National Education Infrastructure Management System Report (NEIMS) indicates that schools in the Eastern Cape and KwaZulu-Natal are in the worst condition, but the problem of poor infrastructure is not exclusive to rural provinces (Department of Basic Education, 2013). It is noted that, of the 24 793 public ordinary schools:
3 544 schools do not have electricity;
2 402 schools have no water supply;
913 do not have any ablution facilities
22 938 schools do not have stocked libraries;
21 021 schools do not have any laboratory facilities;
2703 schools have no fencing at all;
19037 schools do not have a computer centre; and
400 schools in the Eastern Cape are classified as "mud schools".

According to Human (2015), only 8000 schools in South Africa have working flush toilets. Due to these conditions, learners are exposed to illnesses like cholera and diarrhoea. In developing countries, every year, 443 million sick days are recorded for learners suffering from illnesses directly related to unhygienic toilet conditions. Mailovich (2015) indicates that at 30% of schools in Gauteng townships, more than 100 learners must share one toilet. The Wits Justice Project (2015) claims that this figure is much worse than in over-populated jails in Johannesburg, Gauteng, where 65 males must share a toilet.

In November 2013 the Minister of Basic Education, Motshega, published legally binding Norms and Standards for School Infrastructure. For the first time it is now the law that every school must have water, electricity, Internet, working toilets, safe classrooms with a maximum of 40 learners, security, and thereafter libraries, laboratories and sport facilities. In terms of these Norms and Standards, the provincial departments have three years to eradicate schools made from

inappropriate materials such as mud, wood, metal and asbestos (Equal Education, 2013:2).

- Many learners in South African townships and rural areas come from families affected by poverty, hunger, and parents with little or no education themselves. The Afrikaanse Taal- en Kultuurvereniging (ATKV) (2016) states that the South African education system is developed for the middle class, while most of the learners are poor and marginalised. The system is developed for learners who were in a nursery school prior to Grade 1, while most of the learners did not have the privilege to attend an early childhood centre.
- Marais (2016) indicates that the average age of a South African school principal has increased substantially since 2004. In total, 33% of principals in South Africa are 55 years of age and older, in comparison to 17% eight years back. This means that a 1000 school principals will retire every year for the next 10 years, and must be substituted.

3.5.9.1 Subject and content knowledge of South African educators

Taylor (2014) is of the viewpoint that many problems beset the South African school system, including, in many instances, poor management and leadership, and the inefficient distribution of resources. But, even where institutions are well-managed, and teachers have access to sufficient resources, the quality of teaching and learning seem to be unable to rise above the ceiling, imposed by low teacher capacity. This ceiling may be high in a minority of schools, but in the large majority, teaching is often ineffective and learners fall progressively behind the expectations of the curriculum with each passing year. While there are undisciplined teachers who donot make the best use of time, the majority are doing the best they can and would dearly love to be more effective.

Nkozi (2015) explains that the Department of Higher Education and Training (DHET) attributes the enrolment and graduate turn-around to the government's interventions since 2007. This is the year in which it introduced Funza Lushaka, a bursary scheme designed to attract Grade 12s into teaching. Between 2008 and 2010, the department also allocated R570-million to universities to improve their teacher education infrastructure, and thus expand their capacity to take in more students.

Parker (2015), acting Deputy Director General of the DHET and responsible for university education, asserts that a teacher shortage no longer exists as a result of the collaborative efforts that government and other stakeholders have put into expanding teacher education capacity in the country. The size of teacher education in the country is now appropriate to meet national needs (Nkozi, 2015).

The Centre for Development and Enterprise (CDE) (2015:3) indicates that between 2009 and 2012, initial teacher education enrolments rose from 35,937 to 94,237, a 160% increase, as a result of the efforts of the national departments of education to expand the provision of initial teacher education programmes at higher education institutions. Likewise, the number of new teacher graduates grew from 6,978 in 2009 to 13,708 in 2012.

Nkozi (2015) finds that each year Funza Lushaka funds a quarter of the students studying to teach. The funding allocation to the scheme increased from R109-million in 2007 to more than R940-million in 2014. The increase in these bursaries has been a major contributing factor to this growth, and the demand for these bursaries is outstripping the supply. Copious research, by the government and academics, indicates worrying numbers of new teachers who are poorly prepared to teach though.

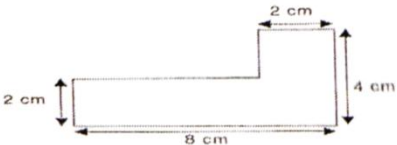
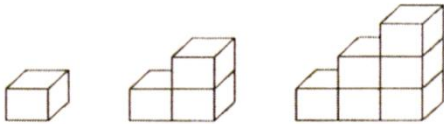
A quantitative study, released and carried out by the Centre for Development and Enterprise (CDE) (2015), concluded that the universities do not produce quality teachers. Researchers and government agree that the subject content and pedagogical knowledge of most South African teachers are poor, and that this is a major cause of

inadequate learner achievement. The fact that teachers lack essential knowledge and skills, points to inadequate teacher training, which is provided through programmes at higher education institutions in South Africa.

This conclusion was also reached in a study by the Initial Teacher Education Research Project (ITERP) (2014), an initiative of JET Education Services, in collaboration with the Education Deans' Forum and the Departments of Basic Education and Higher Education and Training. Taylor (2014) stresses that the cause of poor performance, by and large, lies not with teachers but with the teacher education system that produced them.

The findings of the National School Effectiveness Study (2011:5) further illustrate the problem. Mathematics teachers in the sample were given five simple mathematical tasks, drawn from the Grade 6 curriculum, to do. The mean teacher scores on the respective items are shown in Figure 3.10.

Figure 3.10: Teacher score per item on mathematics test, mean percent correct

Item	Detail	Mean per cent correct	
		G4 teachers 2008	G5 teachers 2009
1	10 days 75 hours can be written as days hours	53	54
2	The perimeter of this figure is: cm 	31	30
3	$\frac{1}{4} + \frac{3}{5} = \underline{\hspace{2cm}}$	53	72
4	 Step 1 Step 2 Step 3 Step 4 How many cubes will there be in Step 4? Answer:	51	51
5	Without calculating, choose the best estimation for adding the two numbers 4723 and 23199. Circle the letter that shows the answer. A. 4000 + 23000 B. 5000 + 23000 C. 5000 + 24000	64	68

Note: Diagrams have been reduced in size

Source: Taylor (2011:5)

The test is too short though to generate reliable findings about teachers' ability in mathematical skills, of which these items are examples. Nevertheless, the low scores on all items are indicative of poor teacher knowledge. Two-thirds of the teachers could answer only three questions, and just 12% could answer all five.

Table 2 shows student scores on the learner mathematics test, according to their teachers' scores on the teacher test. The results show that more than half of the students in the NSES sample were taught by teachers who could answer only two of the five questions correctly. For teachers who scored anything less than five, the mean achievement of their students was very similar. However, those students taught by teachers who could answer all five questions correctly, performed noticeably better, scoring an average of 47% on the learner test, compared to an overall average of 35%.

Table 3.10: Learner performance compared to teacher test scores in mathematics

Teacher score (Max.5)	Students taught by teacher with this score		
	Number	Percentage	Mean Numeracy score (mean %)
0	210	2	37
1	2130	22	33
2	2774	28	34
3	2168	22	34
4	1408	14	34
5	1209	12	47
Total	9899	100	35

Source: Taylor (2011:6)

The recent SACMEQ III results, which involved a longer teacher test with items comparable to those in the Grade 6 learner test; show a low correlation between teacher knowledge and learner scores. This is a common finding even in developed countries, where teacher knowledge, as measured by relatively simple tests, correlates only weakly, at best, with learner performance. According to Hill, Rowan and Ball (2005:399), teacher scores on more complex tests, which assess deeper levels of mathematical understanding, are significant predictors of student gain scores in

mathematics. The authors conclude that efforts to improve teachers' mathematical knowledge through content-focused professional development and pre-service programmes, will improve student achievement. This work suggests that, in order to be effective, a teacher needs to have a thorough conceptual understanding of the principles of the subject discipline, and that different degrees of a relatively shallow understanding have no marked effect on learner performance. The NSES data shown in Table 3.10 above, gives some support to this hypothesis.

A very revealing interaction between the time spent on teaching and teachers' mathematical knowledge, was noted in a modelling exercise performed by the NSES (2011). Students taught by teachers who scored less than 100% in the mathematics test and who reportedly taught for less than 18 hours per week, had a lower numeracy achievement in Grade 4 on average, than students with any other combination of these two teacher characteristics. Students taught by teachers with either better knowledge or more time spent teaching, but not both, performed somewhat better than the poorest performing group. However, students whose teachers scored 100% and reportedly spent more than 18 hours per week teaching, performed substantially better on average (scoring a mean of 54% on the mathematics test) than the other students (scoring a mean of 35%). These pupils also exhibited higher gain scores in Grade 5. Unfortunately, only 7% of students were in this fortunate position.

3.5.9.2 Profile of the South African Teaching Corps

Research from the Centre for Development and Enterprise (CDE) (2015:6) produced some noteworthy and surprising findings about the current teaching force. The CDE used data collected from the annual school surveys on 400,756 teachers, who were South African citizens between the ages of 22 and 65, to produce the following profile of the South African teaching force in 2013:

- **Qualified educators:** A total of 81% of the workforce was qualified; 66% had a matric+3 qualification and 15% a matric+4 qualification.

- **Unqualified educators:** Some 10% of teachers had the equivalent of a matric+3 qualification, but no professional teaching training, and about 10% only had matric+2 or lower. KwaZulu-Natal employs nearly a third (13,532) of all unqualified teachers in South Africa.
- **Atypical and problematic age profile:** The age distribution is not the typical bell curve: it is bimodal with most teachers aged 40 to 49 years. This will create a significant problem by 2025 when this group will be 50 to 59 years old, with many in the process of retiring. The smallest number of teachers will then be 40 to 49 years old. As this is typically the group from which senior managers and principals are drawn, teachers with less experience will have to be promoted to fill these positions.
- **High teacher turnover:** There is a high degree of churning in the teaching force as teachers continually move in and out of the system. Most new teacher graduates enter the system late, at age 28. Many qualified teachers leave, fewer return, and many unqualified teachers stay and upgrade their qualifications or are new hires. The system is in fact a leaky bucket, with more qualified teachers leaving than returning. This means that pumping more new teacher graduates into the system will not in itself suffice to improve the average level of qualification of employed teachers. As a result, the percentage of unqualified teachers is unlikely to decline by 2025.
- **Significant percentage of teachers upgrading:** Between 2012 and 2013, nearly 31% of teachers who upgraded from unqualified to qualified while in employment, exceeded the 22% of new teacher graduates who entered employment for the first time in 2013. This suggests that the majority of teachers build-up their qualifications on the job, often over many years.

Does the education system then serve its purpose considering that South Africa's official unemployment rate is 26.7% (Stats, 2016). Gustafsson, Van den Berg, Shepherd

and Burger (2009:40) warn that illiteracy costs South Africa R550 billion rand in income (and GDP) annually, and is an indicator of the magnitude of the literacy challenge. They emphasise that, within the overall economic growth picture, education clearly is a laggard factor. Currently, like all typically analysed growth factors, the South African education system does not fare well.

Gustafsson *et al.* (2009:40) explain that the enduring problems with school quality in the bulk of the education system, constrain its ability to provide a pathway out of poverty for poor children. Such children frequently attend schools with a lack of discipline, weak management and similarly weak teaching. This relationship between poverty and low-quality tuition is reinforced through several social mechanisms, including the influence of parents and peers.

Van den Berg (2011:1) finds that school management and accountability are issues that keep reappearing as prominent hindrances to school performance. Without a principal who manages school resources efficiently, ensures that teachers arrive at school on time, cover the curriculum and assess at an appropriate level, any policy intervention will achieve limited success. Teachers need to be accountable to principals, and principals to parents and the department. There should be enforcement of standards through appropriate sanctions where required. Accountability devoid of consequences is not accountability. Whereas measures to enforce accountability may have been taken to extremes in some developed countries, in South Africa we have a predisposition towards doing the opposite.

While there have been some recent improvements in pupil outcomes, as well as some important policy innovations, the picture that emerges time and again is both dire and consistent. However one chooses to measure learner performance, and at whichever grade one chooses to test, the vast majority of South African pupils are significantly below where they should be in terms of the curriculum, and more generally, have not reached a host of normal numeracy and literacy milestones. As it stands, the South

African education system is grossly inefficient, severely underperforming and egregiously unfair (Van den Berg, 2011:1).

Spaull (2013a:8) explains that The National Development Plan (NDP) is quickly becoming a roadmap for South African progress and being acknowledged as authoritative by government, business, academia and the public at large. The NDP highlights a number of institutional and systemic factors that prevent progress in the South African schooling system. The four most notable themes are:

- To improve the management of the education system.
- To increase the competence and capacity of school principals.
- To move towards results-orientated mutual accountability, and
- To improve teacher performance and accountability.

Bloch (2009:82) warns that there are nearly 400 000 teachers, with some twelve million learners in about 27 000 schools in South Africa. Principals and the education authorities are often unable to assume the burden of administrative and academic support required from them. Where will 27 000 managers, all capable of running schools well, with due regard for all the different levels of operation and skills required, come from?

3.6 SUMMARY

Education has the potential to play a key role in addressing societal injustice by equalising opportunities, facilitating development and strengthening democracy. In contemporary South Africa, this role remains almost entirely unrealised. The three key features of the South African educational system – low quality, high inequality and deep

segregation – combine to further skew the distribution of resources, delay development and prevent participation in democratic governance.

The poor quality of the majority of public education in South Africa is in itself a major injustice. At the individual level, it blocks the formation of skills and capabilities, preventing South African youth from realising anything approaching their full potential. Poor education condemns them to lives of fewer opportunities, lower incomes, and a more limited capacity for self-determination. Low quality education is also an injustice to the broader society, causing the loss of an enormous amount of human potential. This slows development, making the eradication of poverty more challenging, and probably more distant. Over the longer term, it also damages the national capacity for the provision of all forms of public services, including education itself. A population with high proportions of people with limited skills and opportunities, both economic and otherwise, is also likely to be more susceptible to a range of other social ills such as violence and crime.

While most public education in South Africa is poor, some schools are actually extremely good. Unlike most other middle-income countries, particularly those with high inequality, most South African middle-class children continue to attend public schools, and the private sector remains very small. However, competition over access to ‘good’ public schools can be substantial and appears to be growing, while ‘poor’ schools, particularly in township areas, are often undersubscribed. Inequality in access to high quality educational opportunities has harmful long- and short-term implications for the individual. Over the short-term, individuals at low quality schools are likely to receive fewer resources and less effective teaching. They are more likely to be subject to violence or abuse at school and are more likely to repeat classes, fail, or drop out, and are far less likely to access tertiary education or training. Over the longer term, those who receive poorer education, or spend less time enrolled in school, are likely to have lower incomes, fewer opportunities, poorer health, and shorter life expectancies (De Kadt, 2009:26).

Empirical studies, according to Madsen (2007:188), support the statement that there is a positive correlation between entrepreneurial orientation and business performance, which in practice suggests that businesses that adopt a greater entrepreneurial orientation will also perform better. Within the South African context, limited research has been performed on this matter – especially within the education sector. The dysfunctionality of schools can, among others, be ascribed to school management teams that do not possess the dimensions of entrepreneurship, that are not able to facilitate the sustainable development of the institution and persons within the school (Malan, 2011:52). Concerns about education quality are also inextricably linked to broader accountability issues in terms of education management (Reddy *et al.*, 2010:1).

It is against this background that a new type of leadership is required within schools – corporate entrepreneurial leadership or intrapreneurial leadership. In practice that means leadership with an innovative and revolutionary mentality – an entrepreneurial orientation (Malan, 2011:66).

CHAPTER 4

EFFECTIVE AND SUCCESSFUL SCHOOLS

4.1 INTRODUCTION

The search for effective schools is one of the main educational reform initiatives taking place in many countries today. Academic output measures have been widely used to identify good practices in schools, while other contributing factors are ignored. Botha (2010:605) finds that several studies have indicated that during the past 20 to 30 years, there has been a major shift towards allowing educational institutions greater self-management and self-governance, in a drive to improve school effectiveness (Conley, Schmidle & Shedd, 1988; Gurr, 1996; Dimmock & Wildley, 1999; Gray 2004).

In spite of its widespread practice and implementation of these and other more recent initiatives to improve school effectiveness, no clear or uniformly accepted set of guidelines or assumptions, with regard to the assessment of school effectiveness, exists. There is, according to Brouillette (1997:569), no set of shared assumptions about the actual evaluation on school effectiveness. To date, most of the evaluative work on school effectiveness was, according to Giles (2005), conducted as part of policy research, and tend to focus on monitoring implementation guidelines and using this information to identify features of successful school development plans.

Research into school effectiveness continuously aims to clarify the dilemma with regard to learners' education outcomes (Sun, Creemers & De Jong, 2007; Petty & Green, 2007). A long-standing problem in this regard has been to find ways to measure the learner progress or achievement that identifies the schools' contribution separately from other factors, such as learner ability, background and socio-economic environment. In parallel with this has been a call for schools to be more accountable, which in many cases leads to school effectiveness being judged on academic results, while other contributing factors are ignored.

Gray (2004:187) finds that academic outcomes, usually measured by test and/or examination results, have continued to dominate, while other outcome measures have been neglected or used to a lesser extent. Examination results are a measure of academic learning but do not give the whole picture with regard to the effectiveness of a school academically, and give little information about other outcomes.

MacDonald (2005:1) summarises the skills paradox by stating that “South Africa is faced with a unique employment problem: we have high levels of unemployment, high-skill jobs available and a vast number of graduates out of work”. It is rather disconcerting to find that while business and industry are confronted with a significant skills shortage, the country simultaneously faces a huge unemployment problem. Chee (1997:81) accentuates the need for nurturing a culture of learning within schools that prepares students for a rapidly changing world. It is within this context of needing to prepare a future generation for the challenges they will face, that it is concerning to note that Niemann and Kotzé (2006:609) find that there are “numerous dysfunctional schools”. The researchers stress that within these dysfunctional schools a culture of teaching and learning has essentially broken down (Niemann & Kotzé, 2006:609). Kruger (2003:206) also finds that one of the major challenges confronting educators is the need for creating a sound culture of teaching and learning, in which effective education can take place.

The breakdown of a culture of teaching and learning in a significant number of South African schools is reflected in multifaceted socio-educational problems encountered in schools and communities. Masitsa (2005:205-207) for instance, cites vandalism, gangsterism, drug abuse, a high drop-out rate, poor academic performance, and demotivated learners as observable features of a poor culture of learning. Against this background one needs to assess the claim by Van Deventer and Kruger (2003:3) that an important challenge facing South African schools is the restoration of a sound culture of learning and teaching. Heystek and Lethoko (2001:222) echo this sentiment by arguing that one of the main goals in education today is to restore a culture of learning and teaching in South African schools.

In this chapter the most prominent characteristics of an effective school is identified after the extensive literature study. The purpose is to derive a broad framework from which a school can be evaluated, in order to determine the effectiveness.

4.2 CONCEPTUALISING SCHOOL EFFECTIVENESS

Hallinger and Heck (2011:3) indicate that researchers in several studies concerning school improvement have employed a variety of theoretical perspectives. Scholars have referred to the knowledge base on effective teaching and learning (Creemers, 1994; Creemers & Kyriakides, 2008; Hattie, 2009; Mortimore, 1993), teacher development (Fullan & Hargreaves, 1992; Joyce & Showers, 2002), effective schools (Edmonds, 1979; Hallinger & Murphy, 1986; Purkey & Smith, 1983), and school leadership (Bossert, Dwyer, Rowan, & Lee, 1982; Leithwood, Louis, Anderson & Wahlstrom, 2004; Southworth, 2004), on the assumption that these literatures would provide insights into the nature of classroom and school-level practices that represent high leverage foci for school improvement efforts. Other scholars focus on school improvement as a form of change. These efforts include studies that focus on personal (Evans, 1996; Maurer, 1996; Rogers, 2003), organisational (Kotter, 1996; O'Toole, 1995; Weick, 1976), and educational change (Firestone & Corbett, 1988; Fullan, 2007; Hall & Hord, 2002; Slegers, Geijsel, & Van den Berg, 2002). Another popular angle for exploring school improvement emerged from the literature on school and organisational culture (Saphier & King, 1985; Sarason, 1982).

Researchers generally lack consensus on what constitutes school effectiveness. Scheerens (2004:1) holds the view that it refers to effectiveness enhancing conditions at school level. School effectiveness refers to the performance of the organisational unit called 'school'. The performance of the school can be expressed as the *output* of the school, which in turn is measured in terms of the average achievement of the pupils at the end of the period of formal schooling. It includes all the contextual variables related to school, such as teaching, learning, administration, students' motivation and community involvement. Scheerens (2009:1) finds that the question of school

effectiveness is interesting because it is well known that schools differ in performance. The question is how much schools differ when they are more or less equal in terms of pupils' innate abilities and socio-economic background. According to Creemers and Kyriakides (2010:411), teaching and learning are dynamic processes that are constantly adapting to changing needs and opportunities. Effective schooling should, therefore be treated as a dynamic, on-going process.

Scheerens (2000:19) explains that a somewhat different statement of the principle of 'fair' comparison between schools can be made by assessing the *added value* of a period of schooling. This means assessing the impact of schooling on pupils' achievements, when that attainment can be uniquely attributed to having attended school A rather than school B. Assessing the 'net' or value-added differences between schools are not enough. In this branch of educational research, the really interesting questions start once one has established that there is significant variation: *why* does school A do better than school B, if the differences are not due to differences in the student population of the two schools?

Scheerens (2009:19) explains that different strands of educational-effectiveness research have concentrated on different types of variables to answer this question. Economists have concentrated on resource inputs, such as per-pupil expenditure. Instructional psychologists have investigated classroom-management, such as time spent on tasks, and variables associated with instructional strategies. General education experts and educational sociologists have looked at aspects of school organisation, such as leadership style.

Sammons and Bakkum (2011:10) find that the central focus of School Effectiveness Research (SER) is concerned with the idea that "schools matter, that schools do have major effects upon children's development and that, to put it simply, schools do make a difference" (Reynolds & Creemers, 1990:1). Scheerens (2000:19) argues that the concept of school effectiveness should be seen as a formal 'empty' concept that is indiscriminate with respect to the kinds of measures of school performance that are

chosen. Since the literary meaning of effectiveness is *goal attainment*, the implicit assumption is that the criteria used to measure performance reflect important educational objectives. Opinions about what these criteria should be may differ, and consequently an easy line of attack on school-effectiveness research, is that it has failed to address important educational objectives. In practice, the achievement in basic subjects is the yardstick chosen in the large majority of all strands of empirical educational-effectiveness studies. Secondly, measures of school effectiveness are based on comparative rather than absolute standards.

Sammons and Bakkum (2011:11) define an effective school as one in which students' progress further than might be expected, considering its intake. An effective school thus adds extra value to its students' outcomes, compared with other schools serving similar intakes. In order to assess the value added, measures of individual students, prior attainment is needed in order to provide a baseline against which subsequent progress can be assessed. Other factors such as gender, socio-economic status, mobility and fluency in the majority language used at school, have also been shown to affect progress. In addition to prior attainment, SER studies seek to include such factors in assessing the impact of schools. Saunders (1999:246) offers a detailed analysis of the development of the value added concept. School effectiveness research does not seek to measure the impact of schooling as a whole; instead it examines differences in the impact of one institution compared to another, considering the intake.

Sammons, Hillman and Mortimore (1995:9) explain that 'effects' are expressed in terms of adjusted mean differences between schools, in terms of the percentage of 'explained' variation between schools. The implication is that school-effectiveness studies, carried out within a particular national context, do not say anything about the actual level of educational achievement in that country. In terms of performance levels, the definition of an effective school differs from country to country. According to Sammons and Bakkum (2011:11), a number of studies have sought to quantify the size of school effects on student outcomes. Effect sizes are generally found to be much greater in studies of developing countries and seem to reflect a greater influence of resources and variability

in the availability of trained teachers, textbooks and materials. On average, schools account for around 5-18% of the achievement differences between students after accounting for initial differences. Another way of considering the size of school effects is to consider the differences between *outliers* (significantly more or less effective schools) in terms of their impact on average attainment in public examinations.

Scheerens (2009:20) is of the opinion that in the general description of school effectiveness and school-effectiveness research, it is important to note that school effectiveness is a causal concept. Some authors therefore make an explicit distinction between *school-effectiveness* research and *school effects*. In school-effectiveness research, not only are differences in overall performance assessed but the additional question of causality is raised: which school characteristics lead to relatively higher performance, when the characteristics of the student populations are otherwise constant? Sammons *et al.* (1995:9) explain that a considerable body of research evidence has accumulated, showing that, although the ability and family backgrounds of students are major determinants of achievement levels, schools in similar social circumstances can achieve very different levels of educational progress.

Scheerens (2000:20) finds that school effectiveness is seen as the degree to which schools achieve their goals, in comparison with other schools that are 'equalised', in terms of student-intake, through manipulation of certain conditions by the school itself or the immediate school context. According to Beare, Caldwell and Millikan (1989:11), the concept of 'effectiveness', refers to a business accomplishing its specific objectives. Botha (2010:606) asserts that school effectiveness therefore means that 'the school accomplishes its objectives'. School effectiveness can therefore be regarded as a distinct characteristic of an effective school.

Mortimore (2000:8) explains that the concept of *school effectiveness* can however mean different things, and this has led to a global debate around the concept. Sun, Creemers and De Jong (2007:94) find that studies of school effectiveness have two distinctive aims: firstly, to identify factors that are characteristic of effective schools, and secondly,

to identify differences between education outcomes in these schools. The choice and use of outcome measures has been open to debate in many areas of education research. Botha (2010:606) claims that one of the touchstones of effective schools is the impact on learners' education outcomes (i.e. test or examination results obtained during formal assessment). In this regard Bennet, Crawford and Cartwright (2003:176) define an effective school as 'a school in which students' progress further than might be expected'.

Botha (2010:607) highlights the political nature of school effectiveness by noting that governments determine how schools should function, because of the value-for-money idea. However, to counteract, the dominance of the government view in the management of schools, that aspects such as marketing and the role of the parents and school community are also identified as dominant factors. School effectiveness could indicate how well the school is managed by the principal, and how actively parents and the community are involved.

Cheng (1996:36) claims that the term 'school effectiveness' refers to the 'ratio of output to non-monetary inputs or processes' and includes, among other things, the number of textbooks, classroom organisation, professional training of teachers, teaching strategies and learning arrangements. The term "school efficiency", on the other hand, can be regarded as the "ratio between school output and monetary input" (Cheng, 1996:37).

Sammons and Bakkum (2011:13) explain that a range of studies have sought to identify the 'key characteristics' of effective schools. A number of studies have identified common features concerning the processes and characteristics of more effective schools, based on studies conducted during the last 30 years. These include: achievement oriented teachers with high expectations; sound educational leadership; good consensus and cohesion within the school team; a high quality curriculum; ample opportunity to learn; a favourable, orderly and safe school climate; a considerable evaluative potential in the school; a high degree of parental involvement; a favourable class climate; high effective learning time through excellent class management;

structured instruction; the encouragement of autonomous learning; differentiation (adaptive instruction) and frequent sound feedback to students about their work.

Saleem, Naseem, Ibrahim, Hussain and Azeem (2012:243) find that the definition of effective schools differs from one researcher to the next. Some researchers have focused on the academic achievement of the students, while others did research concerning differences in attitudes and behaviour of the students (Dodson, 2005). Edmonds (1979) synthesises the research and identifies some variables strongly correlated with school effectiveness, such as strong administrative leadership, basic skill acquisition, high expectations for student achievement, a safe and orderly environment and frequent assessing of student achievement. In the literature, this summarising is sometimes identified as the 'five-factor model of school effectiveness'. Lezotte (1991), in conducting school effectiveness research, finds seven correlates of effective schools which evolved from the original correlates shared by Edmonds (1979), and adds these two variables from actual research findings: (1) instructional leadership, (2) clear vision and mission, (3) safe and orderly environment, (4) high expectations for student achievement, (5) continuous assessment of student achievement, (6) opportunity and time on task and (7) positive home-school relations. Student achievement should be the basic product of an effective school; otherwise no official body can evaluate the effectiveness of the school.

Taylor (2011:1) warns that for many poor South African children, who are predominantly located in the historically disadvantaged part of the school system, the on-going low quality of education acts as a poverty trap, by precluding them from achieving the level of educational outcomes necessary to be competitive in the labour market. An important question is the extent to which this low quality of education is attributable to poverty itself, as opposed to other features of teaching and management that characterise these schools. The literature explaining schooling outcomes in South Africa has reached consensus that additional educational resources are no guarantee for improved outcomes. While socio-economic status remains the most powerful determinant of educational outcomes, studies have typically struggled to isolate other school and

teacher characteristics that consistently predict outcomes, leaving much of the variation in achievement unexplained. Several authors have pointed to an ineffable mix of management efficiency and teacher quality that must surely underlie this unexplained component.

The National School of Effectiveness Study (NSES) was the first large-scale panel study of educational achievement in South African primary schools. It examined contextually appropriate features of school management and teacher practice more thoroughly than any other large-sample surveys previously administered in South Africa.

4.3 FACTORS DETERMINING SCHOOL EFFECTIVENESS

After reviewing the literature on school effectiveness, the following major determinants of school effectiveness were identified:

4.3.1 Leadership

Valentine and Prater (2011:1) are of the viewpoint that the principal's role has become increasingly complex as the nature of society, political expectations, and schools as institutions have changed. The predominant role enacted by principals from the 1920's until the 1970's was one of administrative manager. For the most part, despite a trend toward school consolidation, the profession's desire to imitate corporate management, and the political nature of schools, led the majority of principals to simply maintain the status quo (Hallinger, 1992). This managerial approach to leadership focused on the functions, tasks, or behaviour of the principal and assumed that if these functions were carried out competently, the school would operate effectively (Leithwood & Duke, 1999).

In his review of the correlational studies of school principals, Glasman (1984:285) identify their managerial role as the rational component of school organisation, consisting of that portion of policy, daily operations, and decision-making, guided by the functional needs of conducting the work of the school. Myers and Murphy's (1995) study

includes “organisational control” mechanisms: supervision, input controls, behaviour controls, and output controls (e.g. student testing). Rossmiller (1992) identifies the importance of buffering the technical core (curriculum and instruction) of the school from excessive distractions and interruptions. Eberts and Stone (1988) note the significance of the principal being a consistent, assertive disciplinarian.

Rosenblatt and Somech (1998:521) observe that effective principals involved in security, resource acquisition, routine paperwork, as well as communication with staff, students, and outsiders, provide an orderly school schedule and monitoring teachers. Brewer (1993:281) finds that principals indirectly affect all students by simply ensuring that schools run smoothly on a day-to-day basis. Bossert *et al.* (1982) identify that one factor of effective principal leadership is organisation/coordination, which include managerial functions of the principalship. According to Valentine and Prater (2011:2), principal involvement in classroom management appears to be important to school success. They state that structured learning environments with few disciplinary problems characterise successful schools where students are engaged actively in tasks. Principals are important to this process, in particular to the extent that they support teachers with disciplinary problems and buffer the instructional core from disruptions. The managerial behaviour of principals is important to school effectiveness.

Horng and Loeb (2010:66) notice that school leaders matter in terms of school success. Numerous studies spanning the past three decades link high-quality leadership with positive school outcomes. The emphasis on instructional leadership was driven in large by the Effective Schools Movement of the 1970's and 1980's, and has since been renewed because of increasing demands that school leaders be held accountable for student performance (Hallinger, 2005:231). The traditional instructional leadership literature emphasises teaching and learning aspects of school leadership. This research generally concludes that a strong, directive principal, focused on curriculum and instruction, is essential for effective schools. A different view of instructional leadership emphasises organisational management for instructional improvement, rather than day-to-day teaching and learning. However, the quality of teaching in a school, in many

cases, can be affected only marginally by a principal's involvement in the classroom. Strong managers develop the organisational structures for improved instruction more than they spend time in classrooms or coach teachers. Schools that demonstrate academic improvement are more likely to have effective organisational managers.

Simkin, Charner and Suss (2010:9) indicate that the view of the principalship, which it should centre round instruction, not building management or other administrative matters, is one that has gained currency in recent years. The idea is that if instruction is the heart of their job, principals have a vital role to play in school improvement.

Jacobson (2010:33) finds that the effective schools research revealed differences in leadership, structure and climate in schools that showed improved student test scores, as compared to those with declining scores. Principals who led effective schools, worked tenaciously to create safe and orderly learning environments; set clear instructional objectives; expect high performance from teachers and students through increased time on tasks; and develop positive home-school relations (Jacobson & Bezzina, 2008). As a result, "instructional leadership" was found to be the linchpin between principal practices and student achievement. Emphasising the outcomes of principals' actions, as opposed to their pre-existing skills, researchers started analysing the processes leaders employed to promote school improvement. Initially, these "school improvement" studies focused on school change, self-evaluation and how teachers engaged in the improvement process, rather than calculating the correlations of improved outcomes.

Hopkins (2001:29) explains that these studies nevertheless had a positive impact by highlighting "limitations of externally imposed changes, the importance of focusing on the school as the unit of change, and the need to take the change process seriously".

Louis *et al.* (2010:9) agree that a major reason for the attention paid to principals, is the emergence of research that has found an empirical link between school leadership and student achievement. A seminal 2004 study, *How Leadership Influences Student*

Learning, asserts that leadership was the second most important school-based factor in children's academic achievement, and notes that there were few, if any, cases of troubled schools turning around without effective leaders (Leithwood *et al.*, 2004:5).

Sammons and Bakkum (2011:15) show that school effectiveness research has drawn attention to the importance of school leadership as a key characteristic of effective schools. Poor leadership is a well-documented feature of ineffective schools according to inspection evidence (Matthews & Sammons, 2004:91; Mulford, Silins & Leithwood, 2004). School improvement research has highlighted the principal's role in the turnaround of ineffective or failing schools. This is important for schools in disadvantaged contexts. Sammons and Bakkum (2011:15) highlight the following claims about school leadership:

- School leadership is second only to classroom teaching as an influence on pupil learning.
- Almost all successful leaders draw on the same repertoire of basic leadership practices.

Louis *et al.* (2010:37) agree that leadership is second only to classroom instruction as an influence on student learning. They also state, that although school leadership does not make its impact directly, its indirect workings have a statistically significant effect on student achievement. The ways in which leaders apply these basic leadership practices – not the practices themselves – demonstrate responsiveness to, rather than dictation by, the contexts in which they work. Leithwood, Day, Sammons, Harris and Hopkins (2006:3) find that school leaders improve teaching and learning indirectly and most powerfully through their influence on staff motivation, commitment and working conditions.

Cowan, Vaillancourt, Rossen and Pollitt (2013:8) determine that effective principals recognise the potential they have to create a school environment where teachers thrive

and students achieve their greatest potential in a safe and nurturing school setting. As instructional leaders, principals maintain a constant presence in the school and in classrooms, listening to and observing what is taking place, assessing needs, and getting to know teachers and students. Principals set high expectations, bring together a wide range of stakeholders within the school community and work to create a vision that reflects the full range and value of a school's mission. School leaders must mobilise the staff, students, parents, and community around the mission and shared values, as well as the school's improvement goals, and set the parameters of high expectations for the school. Effective practice requires:

- Building consensus on a vision that reflects the core values of the school community, to support student safety and well-being.
- Valuing and using diversity to enhance the learning of the entire school community.
- Broadening the framework for child development beyond academics.
- Developing a learning culture that is adaptive, collaborative, innovative, and supportive, by taking into account the contributions of every member of the school staff.

Bryk (2010:25) explains that principals, in improving schools, engage in a dynamic interplay of instructional and inclusive facilitative leadership. On the instructional side, school leaders influence local activity around core instructional programs, supplemental academic and social supports, and hiring and development of staff. They establish strategic priorities for using resources and buffer externalities that might distract them from coherent reform. Working in tandem with this, principals build relationships across the school community.

Kurland *et al.* (2010:8) are of the viewpoint that vision is considered to be the essence of leadership. It creates a sense of purpose that binds teachers together and propels

them to fulfil their deepest aspirations and reach for ambitious goals (Leithwood & Riehl, 2003:5; Ylimaki, 2006:620). Leadership requires vision. Manasse (1986:151) describes vision as a force that provides meaning and purpose to the work of a business.

Masuku (2011:100) finds that leadership experts have written a great deal about visioning, because leadership and visioning are inseparable (Miller, Devin & Shoop, 2007:28). Ramsey (2003: 41) shares the viewpoint that leadership is the capacity to translate vision into reality. McEwan (2003:67) defines vision as a driving force that reflects the instructional leader's image of the future, based on his/her values, beliefs and experiences. Robbins and Alvy (2003: 83) view a shared vision as a purpose that can or will be evident in the daily activities of the school. A vision is viewed by Duffy and Chance (2007:130) as a journey from the known to the unknown. Leading an organisation is not like a game of *Blind Man's Bluff* where one lurches around blindly with the hope of stumbling into something by chance (Ramsey, 2003: 141), but requires a vision which encompasses all the activities of the school.

For educational leaders who implement change in their school, vision is 'a hunger to see improvement' (Pejza, 1985a:10), as well as 'the force which moulds meaning' (Manasse, 1986:150). Leaders of educational change have a clear picture of what they want to accomplish; they have the 'ability to visualise one's goals' (Mazzarella & Grundy, 1989:21). The Southwest Educational Development Laboratory (2014:3) claims that leaders for change recognise that the people in the institution are its greatest resource. To lead change, the leader must believe without question that people are the most important asset of a business (Joiner & Joiner, 1987:2). This characteristic has three dimensions. The first is the leaders' valuing the professional contributions of the staff, while the second is the leaders' ability to relate to people. The third dimension is fostering collaborative relationships. Valuing people's contributions to a business differs from relating to people and building collaboration.

Mendels (2012:55) raises the question of what exactly it is that effective principals do that ripples through classrooms and influences learning, especially in failing schools.

Since 2000, the Wallace Foundation, which has supported projects to promote education leadership in 24 states and published 70 reports on the subject, has been trying to answer that question. A recently published Wallace Perspective report that takes a look back at the foundation's research and field experiences, finds that five practices in particular seem central to effective school leadership (Wallace Foundation, 2013:4):

- Shaping a vision of academic success for all students - one based on high standards;
- Creating a climate hospitable to education in order for safety, a cooperative spirit, and other foundations of fruitful interaction to prevail;
- Cultivating leadership in others so that teachers and other adults assume their part in realising the school's vision;
- Improving instruction to enable teachers to teach at their best and students to learn at their utmost; and
- Managing people, data and processes to foster school improvement.

4.3.2 High quality Teaching and Learning

MacGregor (2007:6) finds that the effects of the quality of teaching on student achievement have been well documented (Bloom, 1984:5; Black & Wiliam, 1998:9; Martinez & Martinez, 1999:282). Teaching effectiveness research has shown that positive teacher behaviour produces positive student outcomes (Martinez & Martinez, 1999:283). Such conclusions beg the question: which teaching behaviour is more likely to produce positive results?

Hightower, Delgado, Lloyd, Wittenstein, Sellers and Swanson (2011:5) indicate that there is no firm consensus within the field as to exactly what constitutes high-quality teaching or a quality teacher. However, it will be useful to establish a working definition of teacher quality. The clearest and potentially most useful example identified in the literature, comes from the Centre for High Impact Philanthropy (2010:7):

“A quality teacher is one who has a positive effect on student learning and development through a combination of content mastery, command of a broad set of pedagogic skills, and communications/interpersonal skills. Quality teachers are life-long learners in their subject areas, teach with commitment, and are reflective upon their teaching practice. They transfer knowledge of their subject matter and the learning process through good communication, diagnostic skills, understanding of different learning styles and cultural influences, knowledge about child development, and the ability to marshal a broad array of techniques to meet student needs. They set high expectations and support students in achieving them. They establish an environment conducive to learning, and leverage available resources outside as well as inside the classroom.”

Coe, Aloisi, Higgins and Major (2014:2) define effective teaching as that which leads to improved student achievement, using outcomes that matter to their future success. Defining effective teaching is not easy. The research keeps coming back to this critical point: student progress is the yardstick by which teacher quality should be assessed. Ultimately, for a judgement about whether teaching is effective, to be seen as trustworthy, it must be checked against the progress made by students.

Coe *et al.* (2014:3) explain that schools currently use a number of frameworks that describe the core elements of effective teaching. The problem is that these attributes are so broadly defined that they can be open to a wide range of different interpretations, based on whether high quality teaching has been observed in the classroom. It is important to understand these limitations when making assessments about teaching quality. They list the six common components, suggested by research, that teachers should consider when assessing teaching quality. Good quality teaching will likely

involve a combination of these attributes, manifested at different times. The very best teachers are those that demonstrate all of these features:

- (Pedagogical) content knowledge,
- Quality of instruction,
- Classroom climate,
- Classroom management,
- Teacher beliefs, and
- Professional behaviour.

Berry, Daughtrey and Wieder (2010:1) explain that literature – both within education circles and in other kinds of labour markets – links teachers' sense of efficacy and collective responsibility to their teaching effectiveness and improved student achievement (Goddard, Hoy & Hoy, 2000:697). Prior research has found that a teacher's self-efficacy as an instructional leader is strongly and positively associated with soliciting parent involvement, communicating positive expectations for student learning, improving instructional practice, and being willing (and able) to innovate successfully in the classroom (Hoy & Spero, 2005:349; Ross, Hogaboam-Gray, Hannay, 1999:76; Tschannen-Moran, Hoy & Hoy, 1998:241). Increased opportunities to lead build on one another and translate into increased success for instructional leaders. Teachers who report more control over the policies in their schools and greater degrees of autonomy in their jobs are more likely to remain in teaching and to feel invested in their careers and schools (Kirkman & Rosen, 1999:59; Ware & Kitsantas, 2007:304; Watkins, 2005:83).

Berry *et al.* (2010:9) are of the viewpoint that accomplished teachers have the most intimate knowledge of both the content they must teach their students as well as the

context of the community they serve. Providing opportunities for teachers to serve as instructional leaders within their schools, allow them to bring their unique knowledge to bear in meeting student needs, and can be particularly helpful in tailoring and streamlining services to students and families in high-needs schools, as well as developing policies that can sustain them over time. Transformational school and district leaders, who seek out and support the partnership of teacher leaders, lay the groundwork for their joint success.

Bush, Joubert, Kiggundu and Van Rooyen (2010:162) find three fundamental requirements for developing effective teaching and learning in schools:

- Sound classroom practice from specialist educators.
- Sufficient and suitable learning materials.
- Sound and proactive leadership and management of learning (Spillane, 2004:170).

Bush *et al.* (2010:162) shows that there is very limited research and literature on managing and leading teaching and learning in South Africa. A systematic review of the literature on school management in South Africa (Bush, Bishoff, Glover, Heystek, Joubert & Moloi, 2005) find very few sources on this topic and none that offered a comprehensive view based on empirical work. Moloi (2007:467) also notes this problem, but adds that there is a developing awareness of its significance in South African schools. It is increasingly recognised that managing teaching and learning is one of the most important (if not the most important) activities for principals and other school leaders.

The South African Standard for School Leadership, for example, in setting out the core purpose of principalship, focuses strongly on the need to manage teaching and learning effectively. The core purpose of principalship is to provide leadership and management

in all areas of the school, in order to enable the creation and support of conditions under which high quality teaching and learning take place, thus promoting the highest possible standards of learner achievement (Bush *et al.*, 2010:162).

Robinson (2007:21) stresses that the impact on student outcomes is likely to be greater where there is direct leader involvement in the oversight of, and participation in, curriculum planning and co-ordination and teacher learning and professional development. 'The closer leaders are to the core business of teaching and learning, the more likely they are to make a difference to students'. As Hoadley (2007:1) states, in the South African context, 'there is a consensus around the importance of leadership to improved student outcomes'. Bush and Heystek (2006:68) show that South African principals are mainly concerned with financial management, human resource management, and policy issues. The 'management of teaching and learning' was ranked only seventh out of 10 leadership activities in a survey of more than 500 Gauteng principals. Chrisholm, Hoadley and Kivilu (2005:58) add that principals' time is largely consumed by administrative activities.

Bush and Glover (2009), referring to the South African context, claim that a principal who is focused strongly on the management of learning and teaching, would undertake the following activities:

- Oversee the curriculum across the school.
- Ensure that lessons take place.
- Evaluate learner performance through scrutiny of examination results and internal assessments.
- Monitor the work of Heads of Departments, through scrutiny of their work plans and portfolios.

- Ensure that Heads of Departments monitor the work of educators within their learning areas.
- Arrange a programme of class visits followed up by feedback to educators.
- Ensure the availability of appropriate learning and teaching support materials.

As noted above, overall management of teaching and learning is regarded as a key role of South African principals, reflected for example, in the South African Standard for Principalship. Their responsibilities should include setting the framework for effective teaching and learning, developing policies to address this issue, and ensuring that curriculum delivery is being implemented successfully. They have to take a school-wide view. Principals have a direct responsibility towards the quality of learning and teaching for pupils' achievement. This implies setting high expectations, and monitoring and evaluating the effectiveness of learning outcomes (Bush & Glover, 2009). Stein and Nelson (2003:424) argue that it is necessary for the principal to know good instruction when they see it, to encourage it when they do not and to facilitate on-going learning for staff.

Ntshoe and Selesho (2014:483) determine that knowledge of how principals manage the curriculum in schools in South Africa is limited. Although there are detailed normative frameworks on what principals should do, there is little understanding of the reality of the work of principals in particular context, and the work that they actually do. Some clues are offered in relation to school management by early school effectiveness studies in South Africa. These studies empirically show a number of school-level management practices that are associated with better than expected student performance in the country Africa (Hoadley, Christie & Ward, 2009). In particular, a recent study by Chisholm *et al.* (2005) shows how principals' time is largely consumed by administrative activities. The second factor is curriculum leadership and management, where management oversight of teachers constructing their plans, the

monitoring of curriculum coverage, and the management of textbooks and stationery, are associated with positive effects on student performance (Hoadley *et al.*, 2009:5).

Hoadley (2007) reports that four management factors have been shown to be significant in improving student outcomes:

- The regulation of time.
- Monitoring curriculum planning and delivery.
- The procurement and management of books and stationery.
- Quality assurance of tests and the monitoring of results.

Bush *et al.* (2010:167) insist that the main purpose of schooling is to promote learning and teaching. The use of the term 'learner' in South Africa, instead of pupil or student, is a striking illustration of what schools are supposed to achieve. While many South Africans live in challenging circumstances, schools provide one of the few levers for improving the life chances of deprived children and young people. Enabling learners to gain qualifications offers the opportunity of a better life, for them and their families, as well as contributing to South Africa's economic development (Bush *et al.*, 2010:167).

Given the centrality of learning, principals, deputies and heads of departments need to treat the management of teaching and learning with high priority and not 'retreat' into their offices to carry out routine administrative activities. Principals need to focus more strongly on teaching and learning if schools' and learner achievement should improve (Bush *et al.*, 2010:167).

Bush *et al.* (2010:167) proposes that the starting point is to develop a vision for the school that places learning and teaching at the centre. Secondly, principals and their management teams need to set out clear expectations of their learners and educators,

and demonstrate good practice in their own teaching and leadership activities. The essential tools for managing teaching and learning are modelling, monitoring and evaluation. Leaders should provide good models in terms of lesson preparation, subject knowledge, pedagogic approaches, assessment, and learner welfare.

Ko and Summons (2013:40) conclude by stating that the effect of poor quality teaching on student outcomes is debilitating and cumulative. The effects of quality teaching on educational outcomes are greater than those that arise from students' backgrounds. A reliance on curriculum standards and state-wide assessment strategies, without paying due attention to teacher quality, appears to be insufficient to gain the improvements in student outcomes sought. The quality of teacher education and teaching appears to be more strongly related to student achievement than to class sizes, overall spending levels, or teacher salaries.

4.3.3 Staff development

Scheerens (2010:12) states that the environments in which teachers work, and the demands placed upon them by society, are increasingly complex. Teachers strive to equip learners with a wide range of skills that they will require to take their place in a world that is in constant evolution; this hastens the need for the development of more competence-centred approaches to teaching, together with greater emphasis on learning outcomes.

Ono and Ferreira (2010:59) indicate that the literature considers the professional development of teachers as one of the key elements in most of the educational reforms currently in progress in the world. Villegas-Reimers (2003:24) emphasises the relationship between educational reform and the professional development of teachers, and further states that

“Currently in the world, most societies are engaged in some form of educational reform regardless of the scope of the reform, the relationship between educational reform and

teachers' professional development is a two way, or reciprocal, relationship ... educational reforms that do not include teachers and their professional development have not been successful. Professional-development initiatives that have not been embedded in some form of structures and policies have not been successful either."

Richter, Kunter, Klusmann, Lüdtke and Baumert (2010:116) define professional development as an uptake of formal and informal learning opportunities that deepen and extend teachers' professional competence, including knowledge, beliefs, motivation and self-regulatory skills. This definition distinguishes between formal and informal learning opportunities (Desimone, 2009:183). Formal learning opportunities are defined as structured learning environments with a specified curriculum, such as graduate courses or mandated staff development (Feiman-Nemser, 2001:1041).

Ono and Ferreira (2010:60) state that although professional development lies at the heart of nearly every educational effort to improve teaching and learning, it is not the panacea for all problems. Professional development is still seen as the best means to change teaching practice (Supovitz & Turner, 2000:963). In this context, according to Scheerens (2010:12), even initial teacher education of the highest quality, cannot provide teachers with the knowledge and skills necessary for a lifetime of teaching. Teachers are called upon not only to acquire new knowledge and skills, but also to develop them continuously.

Steyn (2011:43) stresses that schools are currently facing their greatest challenge: to provide quality education (Darling-Hammond & Richardson, 2009:47; Fennell, 2005; Hess & Kelly, 2005; Levine, 2005; Southworth & Du Quesnay, 2005). Studies confirm that teachers can play a key role in making a difference in the quality of education, since investing in teachers' development may have more positive effects than investing in other physical resources (Rodrigues-Campos, Rincones-Gomez & Shen, 2005:311; Vemîæ, 2007). Reeves, Turner and Forde (2005:253) believe that complicated dynamics exist, and that individuals cannot change without the compliance and participation of others in a particular system. As such, it is necessary to understand the

processes involved in changing practice among all role players, in order to create effective learning conditions, since these conditions depend on cooperative and collective efforts.

Steyn (2010:257) suggests that the continuous growth of professionals' knowledge and skills is an essential part of improvement in all professions, and teaching is no exception (Boyle, Lamprianou & Boyle, 2005:1). In education it focuses particularly on the teacher as the key to improving learner performance (Desimone, Smith & Ueno, 2006:178; Knight & Wiseman, 2005:387). King and Newman (2001:86) believe that as "teachers have the most direct, sustained contact with students, as well as considerable control over what is taught and the climate of learning, it is reasonably assumed that improving teachers' knowledge, skills and dispositions is one of the most critical steps to improving student achievement". It is therefore necessary to find appropriate professional development approaches to ensure that all teachers, even experienced ones, are equipped with the necessary knowledge and skills for improving learner performance (Hirsh 2005:38; Shaw 2003:39).

Steyn (2010: 257) explains that the professional development of teachers has changed during the past two decades from a "one size fits all" model to more continuous, content and pedagogically-focused programmes (Brandt, 2003:13; Desimone *et al.*, 2006:183; Mundry, 2005:9). The importance of teachers' experience and knowledge with regard to student learning is increasingly, being realised (Knight & Wiseman 2005:9). Unfortunately many professional development programmes concentrate either on the content or on teaching methods (Van Eekelen, Vermunt & Boshuizen, 2006:408).

Steyn (2011:43) adds that the continuous development of professionals' skills and knowledge is a crucial element of improvement in all professions (Boyle, Lamprianou & Boyle, 2005:2). With regards education, the focus is in particular on teachers as the key to improving student performance (Desimone *et al.*, 2006:205). The effective professional development of teachers is embedded in daily school activities, adapted to meet particular school contexts and continued over a period of time (Lee, 2005:40).

Moswela's study (2006:631) indicates that school effectiveness and professional development are 'inextricably' linked. According to Moswela (2006:625), school development planning can raise students' achievement by focusing on the teaching and learning processes. In the process, staff gains new knowledge and skills (Hargreaves & Hopkins, 1991:12), increasing the level of teacher efficiency and effectiveness. As teachers increase their cognitive and technical skills through in-service training, they become better teachers, benefitting the students. Moswela (2006:625) explains that the strong correlation between a competent teacher and improved student achievement emphasises the need for continuous teacher development (Carlin, 1992:50).

Avalos (2010:13) indicates that most studies on professional development consider some form of impact of professional development on teachers' knowledge and practice, including the effects on pupils. Some set out explicitly to explore the effectiveness of programmes on the changes of teachers' personal cognitions, beliefs and practices, as well as the changes in pupils and teacher satisfaction. Darling-Hammond (1999:32) concur, with regard to the effects of teachers' professional development on students' learning, that a number of studies report that the more professional knowledge teachers have, the higher the levels of student achievement.

Changes in cognition took on several forms in the studies reviewed by Avalos (2010:13). Several studies indicate that different modalities of professional development improved curricular knowledge and understanding in areas as diverse as reading comprehension and science, as well as the fostering of student motivation (Cherubini, Zambelli & Boscolo, 2002; Ermeling, 2010:378; Frey & Fisher, 2009; Levine & Marcus, 2010:397; Morais, Neves & Alfonso, 2005; Seymour & Osana, 2003).

Steyn (2011:43) stresses that effective leadership necessitates the active involvement of principals in the learning and developmental processes in their schools (Donaldson, 2009:5; Dymoke & Harrison, 2006:83). Cardno (2005:293) believes that one 'aspect of leadership in its broadest sense, is the capacity of key individuals to exert influence that results in positive change for the school, for teams, for individual staff and ultimately for

the benefit of students'. One implication of this is that principals have to be committed in identifying professional development needs of their staff and provide appropriate professional development programmes to meet these needs (Heaney, 2004:48; Lee, 2005:39). Chappuis, Chappuis and Stiggins (2009:57) agree that effective school managers are those who continuously monitor and evaluate the teaching process. It is within this context that the importance of leadership in improving the quality of schools is identified as a crucial element.

In transforming the South African education system, it is important that teachers are suitably equipped to address the needs and challenges. The President's Education Initiative research project states that the most critical challenge for teacher education in South Africa is the limited conceptual knowledge of many teachers. The National Policy Framework for Teacher Education and Development is an endeavour that aims to provide suitably qualified teachers in South Africa (Republic of South Africa, 2006). This policy identifies two complementary subsystems: Initial Professional Education of Teachers and Continuing Professional Development for Teachers (CPDT) (Republic of South Africa, 2007).

Metcalfe (2011:6) notes the valuable contributions that have been made to an understanding of teachers' continued professional development in South Africa, although much remains in this field of study that is unclear and incomplete. As a developing country, it is crucial that South African students are equipped with the necessary knowledge and skills to become productive citizens and to eventually compete internationally. The education outcomes of South African schools are poor and disappointing. She is of the opinion that the South African education system has failed to transform teaching and that it has not paid enough attention to the professional development of teachers. Her solution lies in developing teachers professionally, because she believes that 'better teachers will make better education' (Metcalfe, 2011:6).

4.3.4 Emphasis on academics

Van Hof (2012:5) defines academic emphasis as a school's campaign for academic excellence. The studies of Hoy and Miskel, (2005) and Hoy, Tarter and Kottkamp (1991) indicate that if high, yet reasonable, goals are set for students, the environment is orderly, students are motivated, students respect academic achievement, and academic excellence can be achieved. Academic emphasis has been reliably measured by a subtest of the Organisational Health Inventory (Hoy & Tarter, 1997). At least four studies confirm that the academic emphasis of the school is significantly related to student achievement (Goddard, Sweetland & Hoy, 2000:684).

Van Hof (2012:17) explains that another current angle on effective schools and school factors focuses on one structure coined *academic optimism* (Hoy, Tarter & Hoy, 2006). Academic optimism bonds the three school characteristics of academic emphasis, collective efficacy, and faculty trust in students and parents together as a single construct. These three elements are statistically correlated to a school's level of student achievement, while working towards school effectiveness. One study (Licata & Harper, 1999:463) found that a healthy school-level emphasis on academics has a significant effect on the overall health and environmental robustness of the school. The results have been proved on varying school levels and regardless of method — regression, structural equation modelling, or hierarchical linear modelling. In fact, Wang (1995:17) conducted an analysis of twenty school-effects studies whereby academic emphasis was one of six characteristics most cited as effective school factors contributing to student success. A large meta-analysis study of numerous school-effects, researched by Marzano (2001:50), led to a list of nine factors related to positive school reform. "Pressure to achieve," "time" (referring to time on task and time in quality instruction), and "monitoring" (referring to the consistent evaluation of student learning and goal obtainment), were three of the most highly correlated variables (Marzano, 2001:50).

Johnson, Livingston, Schwartz & Slate (2000:340) show that factors indicative of an effective school have been highlighted in articles in which parents' concerns about

school choice issues have been expressed. Martinez, Thomas and Kremerer (1994:680) note that parents' school choices are based on educational quality; a finding that conflicts with prior studies in which school choice were often based on non-academic reasons related to convenience, the general school environment, or student activities.

Goddard *et al.*, (2000:684) indicate that educational administration researchers found that one variable consistently found to be related to student achievement, is the academic emphasis of a school — a general perspective of the importance of academics in a school; held by principals, teachers, and students themselves. Research suggests that successful schools maintain a focus on academics. Goddard *et al.* (2000:684) add that school effectiveness requires a focus on student learning and a rigorous instructional program. They believe that academic emphasis, or the extent to which a drive for academic excellence contributes to the behavioural and environmental press of the school, is important to school success.

Hoy *et al.* (2006:434) define academic emphasis as the extent to which a school is driven by its quest for academic excellence - a press for academic achievement. When high, but achievable academic goals, are set for students; the learning environment is orderly and serious; students are motivated to work hard; and students respect academic achievement.

Goddard *et al.* (2000:698) find that academic emphasis is an important element in explaining achievement in both mathematics and reading in elementary schools. They conclude that elementary schools with strong academic emphases positively affect the achievement of poor and minority students.

Roney and Coleman (2011:1-27) indicate that successful school leaders exhibit a bias towards academic emphasis and use their positional authority to guide teachers and students to higher academic achievement. Schools with outstanding student achievement results, typically have strong principals who clearly understand their roles,

their responsibilities and their power. This study revealed that principals who are effective instructional leaders, emphasise the importance of academic goals. School leaders who make student learning a priority do so by setting high academic expectations and by promoting positive organisational health among all school participants. The strong positive relationship between academic emphasis and student achievement, revealed in this study, indicate a commitment by principals to initiate and to sustain high, achievable academic goals for students in their schools. Academic emphasis is a potent force which principals can use to transform schools, by helping students and teachers view academics as a collective property that is directly related to higher student performance (Roney & Coleman, 2011:1-27).

4.3.5 Parental involvement

LaRocque, Kleiman and Darling (2011:115) claim that parenting a child is an awesome joy and responsibility. The role of a parent is all-encompassing to include the role of educator. Typically parents and caregivers are a child's first and most interested teachers. This role does not cease to exist when children enter school; in fact, families play a critical role in the education of their children. Working with the school, parents and caregivers can help create collaborative partnerships that support all aspects of a child's achievement at school. Increased parental involvement in their child's education has many positive implications, including increased achievement levels (Epstein, 1994).

Hornby and Lefaele (2011:37) determine that parental involvement in education has been regarded as an important element of effective education for at least 40 years. There is now extensive research literature available, indicating that parental involvement is advantageous for children of all ages (Desforges & Abouchaar, 2003:83; Eccles & Harold, 1993:569).

Makgopa and Mokhele (2013:219) add that parental involvement is viewed by many researchers in a number of different ways. Bokhorst-Heng (2008:40) argues that parental involvement comes in various forms and will change as a child moves through

primary and secondary school. The author refers to Epstein's (2002) classic six-type model, that captures the potential scope of parental involvement as follows: (1) the basic obligations of parents as care-providers; (2) schools communicating with parents about school programmes; (3) parents volunteering at school; (4) parental involvement in home learning; (5) the parent as decision-maker; and (6) parental involvement as community collaboration. The author hints that, significantly, her model suggests a two-way partnership in which schools support parents and parents support schools towards reaching the common goal of improved student learning.

Fan and Williams (2010:55) explain that parental involvement is parents' participation in their children's education, with the purpose of promoting their academic and social success (Fishel & Ramirez, 2005:371). LaRocque *et al.* (2011:116) define family involvement as the parents' or caregivers' investment in the education of their children. There are different ways in which caregivers can demonstrate their adherence to this investment. In practice, family involvement may be demonstrated via participation in a hierarchy of activities such as the following:

- volunteering at school;
- helping children with their homework;
- attending school functions;
- visiting the child's classroom;
- sharing expertise or experience with the class through guest speaking;
- taking on leadership roles in schools, as well as
- participating in the decision-making process.

Makgopa & Mokhele (2013:220) perceive parental involvement as a combination of supporting student academic achievement and participating in school-initiated functions. Mncube (2010:234) notes that the concept entails awareness of, and achievement in, schoolwork, an understanding of the interaction between parenting skills and learner success in schooling, and a commitment to consistent communication with educators about learner progress. Similarly, Okeke (2014:2) explains parents' participation as helping their children with homework, holding parent–teacher interviews, conducting parent nights, having special consultations on the child's problems, holding parent councils, and helping in the school as well as in the classroom (Moore & Lasky, 1999:13).

LaRocque *et al.* (2011:116) explain that these types of involvement are often chosen by different types of parents. Factors that affect the ways in which families are involved (ways in which they demonstrate their investment), differ and are often based on a number of socio-political factors. The socio-political factors may include socioeconomic status, as well as parents' own past experience with schools and schooling. Regardless of how they are able to demonstrate their investment, the notion that families play a very important role in creating a school that provides a nurturing and safe environment for their children, is becoming widely accepted (Epstein, Simon & Salinas, 1997:3).

Fan and Williams (2010:54) note that parental involvement has been documented as positively impacting students' mathematic proficiency and achievement (Sheldon & Epstein, 2005:204; Sirvani, 2007:33), gains in reading performance (Powell-Smith, Stoner, Shinn & Good, 2000:5), as well as student performance on standardised tests and academic assessments (Domina, 2005:240; Jeynes, 2005:237). In addition, parental involvement was found to be related to fewer behavioural problems in school (Domina, 2005:242), better attendance and class preparation (Simon, 2001:14), better course completion (Simon, 2001:16), and lower dropout rates (Rumberger, 1995:621). LaRocque *et al.* (2011:117) share the view that parental involvement has been found to be beneficial to students' academic success (Hiatt-Michael, 2001:125). Higher levels of parental involvement has been associated with better student attendance, higher math

and reading scores, higher graduation rates, and less grade retention. Anderson and Minke (2007:311) add that when families participate in specific programs aimed at increasing their involvement, improvements are seen in overall achievement, homework completion (Cancio, West & Young, 2004:9), state-wide assessment scores (Sheldon, 2003:149) and behaviour (Kratochwill, McDonald, Levin, Bear-Tibbetts & Demaray, 2004:374). According to Anderson and Minke (2007:311), positive behavioural outcomes associated with parental involvement, include an increased ability to self-regulate behaviour (Brody, Flor & Gibson, 1999:1197) and higher levels of social skills (McWayne, Hampton, Fantuzzo, Cohen & Sekino, 2004:370).

Pena (2001:42) claims that parental involvement has benefits for families too; they become better informed about teachers' objectives and the needs of their children. They develop more positive attitudes toward the teachers. Furthermore, increased involvement has been associated with parents developing higher educational aspirations for their children. They even begin to seek additional education for themselves.

Within the South African context, Okeke (2014:2) explains that parental involvement is uniquely packaged, following the historical antecedents that produced the South African Schools Acts (SASA) of 1996. Although such legislation appears to play both an empowering and a motivational role in parents' involvement in their children's schooling (Brown & Duku, 2008:436; Felix, Dornbrack & Scheckle, 2008:102), there still seems to be a lack of actual involvement of parents in many of the school activities of their children. Studies (Mestry & Grobler, 2007:177; Felix *et al.*, 2008:102; Makgopa & Mokhele, 2013:224) have noted that this lack of involvement is not a lack of interest that prevents parents from becoming involved in their child's education, but rather problems of poverty, single-parenthood, non-English literacy, the effects of the HIV/AIDS pandemic, as well as cultural and socio-economic isolation.

It is also important to note that although many South African parents may be involved in their children's schooling, in many instances, much existing literature on the subject shows a predominance of issues of school governance, where parents are legally

constituted as part of the School Governing Bodies (SGB's) (Mestry & Grobler, 2007:178; Brown & Duku, 2008:433; Mncube, 2010:237; Makgopa & Mokhele, 2013:219). Although the participation of parents in the governance and leadership in schools is vital, it is the academic involvement of parents in the schooling of their children which appears to be more productive. While it is acknowledged that this was not within the scope of the study on which the study is based, it is arguable whether a well-functioning SGB, where parents are actively involved, would guarantee a successful schooling experience for children.

4.3.6 Monitoring pupil performance

Romero-Zaldivar, Pardo, Burgos and Kloos (2011:1) insist that an important factor that contributes toward the effectiveness of a learning experience is the ability of instructors to monitor the overall learning process and potentially act, based on the observed events. In the ideal situation, an instructor monitoring all the events taking place in a learning environment would have a privileged position to adjust whatever parameters are available to improve the overall experience for the students. Rodrigues and Oliveira (2014:30) explain that periodical information about a student's state or level of knowledge is crucial for an efficient and personalised learning experience, as well as to make teaching more effective and accessible to a larger number of students. According to Naong (2011:1591), tests and examinations are meant to monitor and evaluate learners' progress. The results are used to provide support to both learners and educators to improve, as well as to help parents understand where and why improvement is needed.

Safer and Fleishman (2005:81) show that student progress monitoring is a practice that helps teachers use student performance data to continually evaluate the effectiveness of their teaching and make more informed instructional decisions. According to Deno (2003:187), research has demonstrated that when teachers use student progress monitoring, students learn more, teacher decision-making improves, and students become more aware of their own performance.

The North Dakota Department of Public Instruction (2015) indicates that progress monitoring serves two purposes. To determine whether students are making appropriate progress in the core instructional program and to build more effective programs for the students who are not making appropriate progress. McLane (2016:1) agrees that progress monitoring is a scientifically based practice that is used to assess students' academic performance and evaluate the effectiveness of instruction. Progress monitoring can be implemented with individual students or entire classes.

Shapiro (2011:141) claims that progress monitoring has become a critically important tool for improving the academic outcomes of all students. Progress monitoring can be used across a variety of academic areas including reading, mathematics, composition, spelling, and other academic subjects (Hosp & Hosp, 2003:16). Among its many uses, progress monitoring can be used to create instructional groups, identify specific skill deficits, screen students for potential early school failure and assist in eligibility decision making. According to the National Centre on Student Progress Monitoring (2016:1), to implement progress monitoring, the student's current levels of performance are determined and goals are identified for learning that will take place over time. The student's progression of achievement is monitored and instructional techniques are adjusted to meet the individual students' learning needs.

McLane (2016:1) lists the following benefits of progress monitoring:

- accelerated learning because students are receiving more appropriate instruction;
- more informed instructional decisions;
- documentation of student progress for accountability purposes;
- more efficient communication with families and other professionals about students' progress;

- higher expectations for students by teachers; and
- fewer Special Education referrals.

Overall, they claim that the use of progress monitoring results in more efficient and appropriately targeted instructional techniques and goals will move all students to faster attainment of important state standards of achievement (The National Centre on Student Progress Monitoring, 2016:1).

Shapiro (2011:141) explains that progress monitoring has multiple components: establishing and measuring of academic goals; providing a vehicle for understanding how students are progressing toward established goals; creating opportunities for class, school, and/or district-wide screening, to identify students potentially at risk for academic failure; and offering data that can provide accountability evidence to parents, teachers, and educators, about the impact of intervention programs. Hosp and Hosp (2003:17) argue that when progress monitoring is done on a frequent basis, it offers students themselves a chance to see how they are moving toward their goals, supplies a clearer understanding of the impact of the instruction they are receiving, and acts as a potential vehicle for communication with parents. Overall, progress monitoring will assist in defining the level of instruction and curriculum needed by students in all levels of service. Progress monitoring assists schools to ensure that interventions match the needs and learning styles of each student.

Southworth (2004:80) says that monitoring involves visiting classrooms, observing teachers at work, and providing them with feedback. The English Office for Standards in Education (Ofsted, 2003) finds that there is a strong link between good monitoring and good teaching. Southworth (2004:80) adds that 'monitoring classrooms is now an accepted part of leadership'. He concludes that monitoring is a widely distributed role, including head teachers, deputies and heads of departments. Classroom observation is mandated for South Africa's Integrated Quality Management System (IQMS), but also occurs in some schools as a monitoring device.

The Education Department of Scotland (2014:1) claims that the purpose of monitoring is to:

- Support dialogue with learners to improve learning.
- Help learners to understand their own learning, which they may choose to use to inform their profiling activities.
- Provide an overview of each learner's progress and achievement over time, and to share the information (for example with parents) to promote improvements in learning.
- Identify strengths or lack of progress in order to intervene as appropriate, provide a focus for professional dialogue, further assessment, and moderation activities,
- Help staff to review their practice in order to support learners further.
- Ensure that evidence from partners and parents, as appropriate for young people, is included in planning future learning.
- Support analysis of the relative progress of different groups of learners across a school, stage or department.

4.3.7 Evaluating school performance

Chapman and Sammons (2013:5) explain that school improvement research and practice are concerned with making schools 'better' places for students, teachers and the wider community (Reynolds, Creemers, Hopkins, Stoll & Bollen, 1996). Practice tends to rely on the engagement of teachers through continuing professional development. This approach often draws on the principles of inquiry, reflection and self-reviews, as a spur to improvement (Hopkins, Ainscow & West, 1994). The term 'school improvement' is commonly applied in two ways. It can be used as a common-sense

term, to describe efforts to make schools better places for students; or alternatively, it can be used in a more technical sense, namely to describe the processes that contribute to raising student achievement (Hopkins *et al.*, 1994).

MacBeath (2005: 4) defines self-evaluation as a process of reflection on practice, made systematic and transparent, with the aim of improving pupil, professional and organisational learning. Schildkamp and Visscher (2010:372) define school self-evaluation as a procedure involving systematic information gathering, initiated by the school, with the intention to assess the functioning of the school for supporting decision-making, organisational learning and for fostering school improvement.

Schildkamp and Visscher (2010:372) highlight that school self-evaluation systems have been introduced into schools around the world for several reasons. First of all, decentralisation has taken place in many countries. As a result of this, schools are responsible for the quality of their education. According to Hendriks, Doolaard and Bosker (2002), as cited by Schildkamp and Visscher (2010:372), this means that schools must be able to evaluate themselves on a regular basis to maintain and, if necessary, improve their quality. Moreover, a political climate of public sector accountability has arisen. Schools are faced with public judgements of their effectiveness. Some schools try to distinguish themselves from their competitors (Marx, De Vries, Veenman & Slegers, 1995). One way of doing this is to improve institutional quality. School self-evaluation may then also be a way to inform stakeholders about the school's quality.

Faubert (2009:6) stresses that public demands for educational accountability and improvement intensified in most countries over the past decades. Increased demands for effectiveness, equity and quality in education, are justified by the necessity to cope with new economic and social needs. On the one hand, improving the quality of education is necessary in order to meet the ever increasing demand for skilled workers in a context of global economic competition. On the other hand, accountability systems aim at ensuring that school objectives are being met with an effective use of resources.

Effective principals are strong educators, anchoring their work on central issues of learning and teaching, and continuous school improvement. According to Schmoker (1999), the combination of three concepts constitutes the foundation for positive improvement of results, are meaningful teamwork; clear, measurable goals; and the regular collection and analysis of performance data.

Seremet (2012:1) finds that principals must lead their schools through the goal-setting process in which student achievement data is analysed, improvement areas are identified and actions for change are initiated. This process involves working collaboratively with staff and school communities to identify discrepancies between current and desired outcomes, to set and prioritise goals to help close the gap, to develop improvement and monitoring strategies aimed at accomplishing the goals, and to communicate goals and change the efforts of the entire school community. Principals must also ensure that staff development needs are identified in alignment with school improvement priorities, and that these needs are addressed with appropriate professional learning opportunities (Seremet, 2012:1).

In South Africa, according to Setlalentoa (2014:526), before 1994 schools were evaluated by means of inspection. De Clercq (2007:99) elaborates that black schools experienced a long history of unfair and illegitimate school inspections, a legacy that has made them suspicious of any claims to benefit from any form of school inspection or monitoring. The 'inspection panels' comprised of ad hoc inspectors who were not specialists in any field of study. The inspections were aimed at individual achievements and were done without control. The situation regarding evaluation in the post-apartheid era is still problematic, given the negative experiences of the past.

After 1994 the solution to evaluation was to adopt a *Whole School Evaluation* approach. According to the ELRC (2004), the Whole School Evaluation (WSE) process is transparent and interactive; it involves the holistic evaluation of the performance of the school against set criteria, with a view to improve the quality of education. According to the Department of Basic Education (2002:3), Whole School Evaluation is the

cornerstone of the quality assurance system in schools. It enables a school and external supervisors to provide an account of the school's current performance and to show to what extent it meets national goals as well as the needs of the public and communities. This approach provides an opportunity for acknowledging the achievements of a school and for identifying areas that need attention. Whole-school evaluation implies the need for all schools to continuously look for ways of improving, and the commitment of government to provide development programmes designed to support their efforts.

In the National Policy on Whole-School Evaluation (2001), a combination of internal self-evaluation, as well as external evaluation, according to the same set of prescribed criteria, is advocated. This is now the type of evaluation being done in South African schools. Setlalentoa (2014:527) explains that self-evaluation and external evaluation are the means to quality assurance in schools. External evaluations become effective and meaningful only when schools have well-developed internal self-evaluation processes in place.

4.3.8 Discipline

Guskey (2000) claims, teachers are the key to successful school reform. According to Sadruddin (2012:24), many teachers find it difficult to maintain discipline in their classrooms. It is moderately difficult for them to use effective techniques to prevent the development of classroom disciplinary problems. There is a large variety of strategies for maintaining discipline. Some of these strategies are believed to increase hostility. In contrast though, there are a few strategies that may be more productive; such as positive reinforcement, recognition of responsible behaviour and giving attention to misbehaving students.

Du Preez and Roux (2010:13-14) indicate that discussions regarding the notion of discipline, are often permeated with references to corporal punishment, or are even synonymous with discussions of corporal punishment. Vally (2005:4) explains that the notion of discipline has evolved from a view that focuses on what children should not

do, thus corporal punishment is applied to correct unwanted behaviour, as opposed to the view that emphasises what the child should do and promotes self-disciplined behaviour amongst children. According to Maphosa and Shumba (2010:389), prior to South Africa's independence in 1994, the maintenance of discipline in schools heavily relied on the use of corporal punishment, and discipline was seen as synonymous with punishment. Mtsweni (2008:1) observes that after the banning of corporal punishment in schools, most educators feel incapacitated and helpless in dealing with learner indiscipline in schools. Learners are believed to have now become ill disciplined to the extent that they even openly challenge teachers' authority, because they know that nothing would be done to them.

Mtsweni (2008:1) states that sound discipline and safety underpins every aspect of school life. For successful teaching and learning to take place, it is essential that good discipline exists in every classroom in particular and in the school as a whole in general. Mestry and Khumalo (2012:97) explain that for effective learning to take place, it is critical that a safe, secure, and positive environment is created (Joubert & Squelch, 2005:23). To this end, the Department of Education (2008:1) asserts that the school is committed to providing an environment conducive to the delivery of quality teaching and learning, by promoting the rights and safety of all learners, educators and parents. Rossouw (2007:395) describes a disciplined environment as an environment free of any disruptive behaviour, which mostly relates to behaviour or actions by learners that may negatively affect their education or that may interfere detrimentally with the atmosphere conducive to learning in the classroom or any other school activity.

Potgieter, Visser, Van der Bank, Mothatha and Squelch (1997:59) notice that if discipline is not taken seriously, it may also affect the educational attainment of the learners. In this regard Levin and Nalon (1991:30) state that, in addition to the obvious impact on the teaching and learning environment, disruptive behaviour can also affect the learners' safety, readiness to learn, as well as future behaviour. According to Mestry and Khumalo (2012:98), numerous education experts (Oosthuizen, Roux & Van der Walt, 2003:373; Joubert, De Waal & Rossouw, 2004:84; Van Wyk, 2001:196; Mabeda &

Prinsloo, 2000:34) rank learner discipline as one of the major concerns expressed by all stakeholders in the education process in South Africa. A study conducted by Rossouw (2003:413) reveals that there has been a decline in the level of discipline in schools in recent years that seriously hampered the teaching and learning process.

Cowan *et al.* (2013:8) highlights that school discipline policies are ultimately the responsibility of the school principal; however, all school staff plays a role in their effective development and implementation. In South Africa, according to Mestry and Khumalo (2012:99), the signing into law of the South African Constitution (Republic of South Africa, 1996) and the South African Schools Act (Republic of South Africa, 1996), has impacted radically on the management of learner discipline in schools. Although the principal, the school management team and educators normally form the most visible front in the disciplinary process, the School Governing Body (SGB) has a statutory or legal duty to ensure that correct structures and procedures are put in place so that any disciplinary measures taken against ill-disciplined learners are administered fairly and reasonably, in accordance with the above-mentioned laws. Both Section 8 and Section 20 of the South African Schools Act (Republic of South Africa, 1996) make it mandatory for all SGBs to develop and to adopt a code of conduct for learners, aimed at establishing a disciplined and purposeful school environment, dedicated to improving the quality of the learning process.

Cowan, Vaillancourt, Rossen and Pollitt (2013:8) stress that discipline practices should function in concert with efforts to address schools' safety/climate. When positive discipline is incorporated, students feel respected and supported, positive behaviour is continually reinforced, and school climate improves. Additionally, this structure allows for the use of restorative practices that seek to build positive relationships within the school community. In contrast, overly harsh and punitive measures, such as zero tolerance policies, lead to reduced safety, connectedness, feelings of belonging, and have historically been unsuccessful at improving student behaviour or the overall school climate. Positive discipline enables learners to progress towards responsibility, relationship building and a greater sense of well-being. McCrary, Lechtenberger and

Wang (2012:4) indicate that positive discipline is effective in increasing discipline references and failure rate. Positive behaviour can also increase the educational attainment and successfulness of learners.

Bej (2016:84) asserts positive discipline can help teachers develop classrooms where students are taught the skills needed to respect, and learn how to cooperate with each other. It also helps teachers to set a classroom climate where there is acceptance, respect, and encouragement. Teachers learn how to demonstrate caring by talking with students, showing personal interest in their achievements and facilitating relationships by removing the existing barriers.

Bej (2016:85) explains that positive discipline has a positive impact on schools. Several studies show that vandalism and suspension decreased, and that teachers reported great improvement in classroom atmosphere, behaviour, attitude and academic performance (Platt, 1979; McVittie, 2003). Du Preez and Roux (2010:13) argue that schools should start negotiating values at the most basic level. Emancipation, human rights, values, and cultural morals could underpin positive discipline in schools.

4.3.9 Feedback

Laurillard (2002:55) claims that an established principle of good practice is that 'action without feedback is completely unproductive for a learner'. Beaumont, O'Doherty and Shannon (2011:671) elaborate that it is well-known that assessment defines the education curriculum in learners' eyes, and has a major influence on their learning, being viewed as a more powerful driver than teaching in determining what students do and how they do it.

Beaumont *et al.* (2011:671) show that a compelling consensus emerges from research, namely that high-quality feedback is the most powerful single influence on student achievement, and that students want and value quality feedback. Brown, Bull and Pendlebury (1997:7) explain that assessment has long been viewed as the catalyst for

improvement in teaching and learning: 'If you want to change student learning then change the methods of assessment'. Today the provisioning of quality feedback is widely perceived as both a key benchmark of effective teaching and a vital requirement in meeting students' expectations (Higgins, Hartley & Skelton, 2001:273).

Burnett and Mandel (2010:145) explain that research into the use of praise in the classroom has been on-going since Brophy's (1981) seminal work outlined a functional analysis of teacher praise and feedback. In two studies (Burnett, 2001, 2002) data was collected on the use of general, non-targeted praise (excellent, well done, that's great), negative feedback (that's not good enough, that's untidy work), 'effort' feedback (you're working hard on your reading) and 'ability' feedback (you're really smart at maths).

Burnett (2001:21) reports that 91% of children wanted to be praised for their achievement and behaviour. Interestingly, most (52%) wanted to be praised quietly and individually while only 32% wanted to be praised loudly in front of their peers. Some 17 % did not want to be praised at all either individually or publicly. Many students (91%) reported wanting to be praised often or sometimes for being smart and clever at their schoolwork (ability feedback), but when given the choice between receiving effort or ability feedback, a strong preference for receiving effort feedback was evident.

Burnett (2002:13) uses structural equation modelling to investigate the relationships between feedback and students' perceptions of their relationship with their teacher and the classroom environment. The results demonstrate that negative teacher feedback and effort feedback were related to their relationship with the teacher. Students who reported a positive relationship with their teacher, perceived that their teacher gave them extensive effort feedback and little negative feedback. Additionally, students who reported that their classroom was a positive environment reported a positive relationship with their teacher and perceived that their teacher gave them a great deal of ability feedback.

Partin, Robertson, Maggin, Oliver and Wehby (2010:173) claim that teacher praise as contingent on, or as a consequence of appropriate student behaviour, is a classroom and behaviour management strategy with a long and thorough base of empirical support. Across age groups teachers' use of contingent praise effectively reinforced, or increased, a variety of appropriate student behaviour and academic skills.

4.3.10 High expectations

Educational research has, according to Zhang (2014:3), identified many factors that could influence students' school achievements, including teachers' educational expectations, and teacher and student perceptions of students' school experiences. There are numerous studies about the relationships between teachers' expectations of students' future school attainment and students' school achievements (Hallinan, 2008:282; Entwisle, Alexander & Olsen, 2005; Benner & Mistry, 2007). Other studies provide evidence that teachers' perceptions of students can positively or negatively influence students' performance and achievement (Weinstein, 2002; Croninger & Lee, 2001). Gregory, Cornell and Fan (2011:911) explain that low negative feedback and high expectations are associated with higher classroom grades.

Calaguas (2012:50) finds that the world is rapidly changing and the "modern society expects everyone to be a high achiever" (Daulta, 2008:75). However, "success in any meaningful endeavour is marked by a history of high expectations that provide the challenge and inspiration necessary to press the individual to his/her highest level of performance" (Ozturk & Debelak, 2005:1). Therefore, no matter what the obstacles are, everyone is encouraged to succeed, because those who succeed are valued and considered important by society members. In schools, students are constantly expected to do their best because of the belief that success in school is correlated with success in life. With the world becoming more and more competitive, the quality of performance has become a primary factor (Nuthanap, 2007) and is not only important to students, but also to those around them (Puar & Thukral, 2010:7). Taylor (2011:19) shows that contrary to the suggestion that today's students are asking for a diluted or moderated

curriculum, research shows that students prefer to be held to high expectations: they desire quality, rigorousness, as well as a meaningful curriculum and high academic goals.

Ozturk and Debelak (2005:3) show that a person's expectations for him- or herself, are important in the sense that people usually set their goals first and then develop their action plans accordingly. Others' expectations of individuals are also critical, since people tend to strive to accomplish what is expected of them. In both cases, without high expectations, individuals invariably drift toward mediocrity or even failure. Johnson *et al.* (2000:346) concur that the strong relationship between expectations and academic achievement has been well-established both theoretically and empirically. Schools with exceptional levels of academic achievement consistently demonstrate reaching high expectations and goals, supported by data-driven collaboration and on-going assessments (Schmoker, 2001).

Tinto (2012:4) notices that students' classroom performance is driven, in part, by the expectations that academic staff have for their students and that students have for themselves. Student success is directly influenced not only by the clarity and consistency of expectations, but also by their academic level. High expectations are a condition for student success, while low expectations are a harbinger of failure. Simply put, no one rises to low expectations. An academic staff member's expectations are communicated to students - sometimes implicitly - through syllabi, assignments, grading metrics, course management sites, and conversations. Students quickly pick up what is expected of them in the classroom and adjust their behaviour accordingly. Gregory *et al.* (2011:922) add that, in schools with high academic expectations, staff react less punitively to misbehaviour and successfully re-engage rule breakers in the learning process, because of their greater emphasis on developing academic talent, compared to staff in schools with low academic expectations.

The National Council of Teachers of mathematics (2011) describes that to hold high expectations, means to engage all students in cognitively challenging tasks that are simultaneously within reach and rich enough to stretch students as far as they can go.

Holding high expectations does not necessarily mean accelerating coursework or presenting material that is more difficult or should be done faster. Teaching with high expectations for all students ensures greater understanding for every student.

Stronge (2002:37) indicates that “high expectations represent an overall orientation toward improvement and growth in the classroom, which has been demonstrated to be a defining characteristic of benchmark schools.... Effective teachers not only express and clarify expectations for student achievement, but also stress student responsibility and accountability for striving to meet those expectations”.

Meece, Anderman and Anderman (2006:499) report a link between expectations and motivation. Students’ intrinsic motivation is evident when they desire to learn, simply because it interests them or they recognise the importance of learning. Extrinsic motivation is a response to either incentives (points and prizes) or disincentives (threats and punishments). According to Deci, Koestner & Ryan (1999:659), intrinsic motivation has a greater impact on student learning than extrinsic motivation.

Alarming, and applicable on the situation in South Africa, Zhang (2014:5) warns that in general, teachers tend to have lower educational expectations for students from minority groups and low income families, compared with their peers from higher income families. At the same time, students from disadvantaged families tend to have lower expectations themselves. According to Lynn, Bacon, Totten, Bridges and Jennings (2010:294), teachers share the responsibility of pushing students and helping them succeed. Better teachers create better results with students in need, but the education system in the United States of America does not include a way for minority and low SES students to have access to the most qualified teachers. In some cases, the teachers share some of the blame. New teachers, who would in all traditional measures be deemed qualified, sometimes lack confidence in their ability to educate African American students.

Ruiz (2012) maintains that there are other factors that augment high expectations, but the linchpin of academic achievement is high expectations. Even if educators could straighten out all of the supporting factors - finance, teacher quality, equity issues, etc. -, without high academic expectations for themselves and/or high expectations of others for them, students would still not reach high levels of achievement. Ozturk and Debelak (2005:3) suggest that setting high expectations may give rise to the Pygmalion Effect, which may change student behaviour.

Chang (2011:198) explains that there is consensus that the Pygmalion effect involves both positive and negative expectations. In the light of a self-fulfilling prophecy, the Pygmalion effect means, “you get what you expected”. If teachers hold positive expectations towards students, they will be given more learning opportunities; increased challenges; be provided with more detailed feedback; be praised more often following success and encouraged more frequently following failure. Thus, teacher behaviour influences student performance in a positive way, and vice versa. If teachers hold negative expectations towards students, they will fall into disadvantageous learning conditions where by the teachers’ behaviour would influence student performance in a negative way.

Williamson (2012) explains that in a culture of high expectations, the role of the principal is to remove barriers to success. An effective principal understands the importance of high expectations and is committed to working collaboratively with their staff to make necessary changes. He or she is an advocate for changing instruction. They lead the conversation with their staff. Most of all, they are comfortable challenging long-standing beliefs and norms about schooling. They focus intently on student learning, and make every program, policy and practice at their school, convey to students that they are expected to achieve at very high levels, and that they will be successful.

4.3.11 Safe and orderly schools

Lacoe (2013:4) asserts that effective teaching and learning can take place only in a safe and secure school environment. A safe environment is a prerequisite for productive learning (Maslow, 1970; Piaget, 1936). A safe school may be defined as one that is free of danger and where there is an absence of possible harm. A place in which non-educators, educators and learners may work, teach and learn without fear of ridicule, intimidation, harassment, humiliation or violence. A safe school is therefore a healthy school, in that it is physically and psychologically safe. Prinsloo (2005:5) elaborates that safe schools are further characterised by good discipline, a culture conducive to teaching and learning, professional educator conduct, good governance and management practices, and an absence (or low levels) of crime and violence (Squelch 2001:138).

Bucher and Manning (2005:56) are of the opinion that a safe school is one in which the total school climate allows students, teachers, administrators, staff, and visitors to interact in a positive, non-threatening manner that reflects the educational mission of the school, while fostering positive relationships and personal growth. The decisions of individual teachers about classroom management theories, or their choices of management practices and strategies, have significant effects on the school climate and the ways in which students resolve problems.

Mabie (2003:157) claims that by providing freedom from violence, fear, and intimidation, a safe school fosters acceptance and caring in an environment where expectations for student behaviour are clearly articulated, consistently enforced and fairly applied. Xaba (2006:567) describes a safe school as a school that is physically and psycho-socially safe. Regarding the school's physical environment, the most visible aspects of such features are the quality of the security and maintenance of school buildings and grounds. According to Squelch (2001:138), this implies a clean and safe environment that is conducive to education, secure property, well-cared for facilities, furniture and equipment, clean toilets, water, a green environment, and absence of harassment.

Thapa, Cohen, Guffey and Higgins-D'Alessandro (2013:358) show that the National School Climate Council (2007:4) recommends that *school climate* be defined in the following way: *School climate* is based on patterns of people's experiences of school life and reflects norms, goals, values, interpersonal relationships, teaching and learning practices, as well as organisational structures. This climate includes norms, values, and expectations that support people feeling socially, emotionally and physically safe. According to Zullig, Koopman, Patton and Ubbes (2016:141), reviews by Cohen (2006) and Freiberg (1999) reveal order, *safety*, and *discipline* (Furlong, Greif, Bates, Whipple & Jimenez, 2005:148; Wilson, 2004:293) as important school climate domains.

Bucher and Manning (2005:56) explain that by encompassing more than just physical safety, school safety also implies intellectual and emotional safety (Kohn, 2004:38; Merrow, 2004:19). With *intellectual safety*, students realise that they can think, doubt, and question what they are learning, and even make mistakes in a secure environment (Merrow, 2004:28). Teachers take the time for inquiry learning and utilise a number of instructional strategies to involve all students. Classroom rules and procedures provide a safety net where individuals are free to express their concerns and ideas.

Emotional safety is also important. According to Bucher and Manning (2005:56), a number of studies (Sandu & Aspy 2000; Aspy, Oman, Vesely, McLeroy, Rodine & Marshall, 2004) indicate that violent events in schools were preceded by incidents where the eventually violent students were teased, bullied, or ostracised by others; or isolated from other students. Stevick and Levinson (2003:324) believe that our inability to comprehend why some people would be so happy to kill us aggravates our sense of powerlessness and personal security. Lewis (2003:335) contends that we are in an era of school militarisation and student criminalisation that reduces civil liberties and creates a culture of a police state in schools.

Xaba (2006:567) states that safe and secure school environments are a requirement by law. Sections 24(1) and 28(1) of the Constitution (Republic of South Africa, 1996) provide that "everyone has a right to an environment that is not harmful to their health

and well-being" and every child has the right to be protected from maltreatment, neglect, abuse or degradation. The Gauteng Schools Act (Gauteng Department of Education, 1997) stipulates that all learners or educators shall be protected from all forms of physical or mental violence at schools and centres of learning.

Lacoe (2013:4) is of the opinion that feeling unsafe in the classroom may decrease concentration in class and performance on assessments. Henrich, Schwab-Stone, Fanti, Jones and Ruchkin (2004:336) find that exposure to community violence is related to academic achievement, as well as to feelings of safety. Arum (2003) determines that feelings of safety are positively related to both behavioural and academic outcomes. He finds variation in the relationship between safety and academic outcomes by gender. Feelings of safety have larger positive associations with test scores for females than males, and larger positive associations with behaviour (decrease in fighting) for males than females. If students feel unsafe at school, one response may be to stay home. Therefore, increased school absence may be the primary path through which feeling unsafe affects academic outcomes. A notable contribution to the literature is Gottfried's (2010:460) work identifying the relationship between attendance and achievement.

Cornell and Mayer (2010:8) show that there is a body of evidence demonstrating that school disorder impairs learning and achievement, likely in interaction with multiple dimensions of psycho-social functioning. Several studies indicate that student misbehaviour not only disrupts the classroom and robs teachers of precious instructional time (Aleem & Moles, 1993; Dinkes, Cataldi & Lin-Kelly, 2007; Gottfredson, Gottfredson, Cantor, Crosse & Hantman, 2000), but has a broader and longer lasting impact as well. Teachers can suffer from emotional strain and burnout that damage their feelings of commitment and self-efficacy, leading to negative and depersonalising attitudes toward students (Browsers & Tomic, 2000:248; Hastings & Bham, 2003:119). Like their teachers, students are also distracted from instruction by student misconduct. In many cases, the distraction is compounded by anxiety over bullying and fears for personal safety (Hanish & Guerra, 2002:88). According to Cornell and Mayer (2010:80),

in sum, safe and orderly schools are the *sine qua non* for efficient and effective academic programs.

4.3.12 Learner self-esteem

Vishalakshi and Yeshodhara (2012:83) show that academic achievement of students is influenced by so many student related, teacher related and school related factors. Among these, self-esteem is considered to be very important. Self-esteem is a widely used concept, both in popular language and in psychology. The term self-esteem is derived from a Greek word, meaning, “reverence for self.” The “self” part of self-esteem pertains to the values, beliefs and attitudes that we hold about ourselves. Simplistically, self-esteem is the acceptance of people for whom and what they are at any given time in their lives. Self-esteem is a positive or negative orientation towards oneself, an overall evaluation of one’s worth or value.

Neff (2011:1) defines self-esteem as an evaluation of our worthiness as individuals, a judgement that we are good, valuable people. McClure, Tanski, Gerrard and Sargent (2010:2) agree that self-esteem, as an overall reflection of an individual's self-worth, encompasses beliefs about oneself, as well as an emotional response to those beliefs. According to Wang and Veugelers (2008:620), representing the capacity to feel worthy of happiness and be able to successfully address life challenges, self-esteem is an important determinant of adolescent mental health and development.

Vishalakshi and Yeshodhara (2012:84) explain that self-esteem has been found to be significantly associated with a number of important aspects of human behaviour, such as general adjustment, anxiety, acceptance of other people and child rearing practices. According to Bauman (2012:7), self-esteem is one of the factors influencing academics. While family, others’ expectations, and learning approaches do affect academics, self-esteem has the strongest impact on learning, and that improving self-esteem is very important. A low self-esteem can affect achievement in the classroom.

Bauman (2012:7) asserts that there is a strong link between self-esteem and deep processing, as well as effort, and concludes that higher self-esteem is important in learning (Roman, Cuestas & Fenollar, 2008:134). Shahzad, Ahmed, Jaffari and Khilji (2012:352) agree and find that self-confident students show better results than low-confident students. Self-esteem is an influential contributor to academic success, productive behaviour, mental and physical health in children. A supportive environment has a substantial effect on student performance.

Bauman (2012:7) explains that self-esteem is not a constant, and changes depending on the messages received from others (Schweiger, 2008), as well as self-perceptions of oneself. Self-esteem is a perception and is based on people's feelings about themselves, and not necessarily about what others think of them (Roman *et al.*, 2008:128).

Neff and McGehee (2010:225) indicate that the formation of identity is one of the major tasks of adolescence. The emotional difficulties of the teen years often stem from concerns with self-evaluation. A continual process of self-evaluation and social comparison occurs as teens attempt to establish their identity and place in the social hierarchy. The intense pressures faced by most adolescents, such as stress over academic performance, the need to be popular and "fit in" with the right peer crowd, body image, concerns with sexual attractiveness, and so on, means that the self-evaluation of teens are often unfavourable. Negative self-judgments are strongly implicated in the high rates of anxiety, depression, and attempted suicide found during this period.

Reijntjes, Thomaes, Boelen, Van der Schoot, De Castro and Telch (2011:778) find that some students experienced a decline in self-esteem when others disapproved of them. It seems to be a circular effect: lower self-esteem affects learning and failure in academics or the perception of how others feel about one, can lower self-esteem. Bauman (2012:7) shows that a source of higher self-esteem is feeling that one has the ability to succeed. If one feels one has the ability to learn, that positive feeling may

enable that student to learn. This feeling of competence comes from having a higher self-esteem.

Bauman (2012:10) warns that lower self-esteem can lead to behavioural problems (Guerra, Williams & Sadek 2011:306) and to increased aggression in some children (Donnellan, Trzesniewski, Robins, Moffitt & Caspi, 2005:334). In contrast, being bullied can lead to lower self-esteem (Guerra *et al.*, 2011:306). Not all children will experience a lowered self-esteem during adolescence, due to multiple factors; others will, however, especially it as they enter adolescence (Kort-Butler & Hagewen, 2011:576). Keeping students from experiencing the destabilisation of self-esteem during adolescence should be a goal of all educators, as it may diminish the incidents of bullying.

Kort-Butler and Hagewen (2011:569) show that low self-esteem is linked to problems, such as life dissatisfaction, physical health problems, depression, substance abuse, suicidal behaviour, and aggressiveness. As such, low self-esteem represents a vulnerability factor that substantially increases the risk for negative outcomes. Phillips, Smit and Modaff (2001:81) explain that a look inside any classroom will yield various levels of self-esteem among the students. It usually is not difficult to pick out the ones that have lower self-esteem vs. those with higher self-esteem. The students who have the lower self-esteem tend to be quiet, withdrawn, sit in the back of the class, and do not participate in class activities as readily as those with higher self-esteem.

Vishalakshi and Yeshodhara (2012:84) prove that the improvement of self-esteem increases the academic achievements of learners. It necessitates orienting teachers on conducting activities to enhance the self-esteem of students, through:

- Arranging and encouraging a variety of group activities.
- Ensuring that all pupils experience trust-building activities.
- Instigating positive behaviour programmes and a systematic scheme of rewards.

- Promoting and acclaiming individual successes across a wide range of academic and non-academic achievements.
- Boosting self-esteem through individual counselling.
- Involving parents and/or other adults in goal setting.

A high level of self-esteem brings a high level of confidence, problem solving abilities, and assertiveness, and thus elevating the performance or achievement level of the pupils.

4.3.13 Class size

Cho, Glewwe and Whitler (2012:77) explain that policymakers, parents, school principals, and many pundits are all concerned about how much, or in some cases how little, students learn in school. One policy that has received much attention is reduction in class size. Intuitively, smaller classes should allow teachers to provide more attention to each student, and reduce time spent disciplining students, which should increase learning. Indeed there appears to be consensus among parents, teachers and school administrators that small classes improve students' academic achievement, especially among elementary (primary) school students.

Blatchford, Basset and Brown (2011:715) highlight that in many countries over the world there has been a widely reported debate over the educational consequences of class size differences. Opinions vary from those academics and policy makers who argue that class size reduction is not cost effective, to those who argue that it should be a main feature of educational policy. In some countries policy has changed in favour of small classes. In the U.S.A, over 30 states have enacted legislation for class size reduction programmes. A lot of attention has been paid, in several studies, to whether or not smaller classes lead to better academic outcomes for pupils, although there is a good deal of controversy over the magnitude of these effects (Anderson, 2000; Biddle &

Berliner, 2002; Blatchford & Mortimore, 1994; Blatchford, Russell and Brown, 2009; Ehrenberg, Brewer, Gamoran, & Willms, 2001; Finn, Pannozzo, & Achilles, 2003; Hattie, 2005; Wilson, 2006). Though there is some agreement, drawing on experimental (Finn & Achilles, 1999) and naturalistic studies (Blatchford, Bassett, Goldstein, & Martin, 2003), the conclusion is that smaller classes have positive effects on pupil academic performance, if introduced immediately after school entry, that is, with the youngest children in school.

The conclusions of a study by Krueger (1999:497), reveals that on average, performance on standardised tests increases by four percentile points the first year that students attend small classes. The test score advantage of students in small classes expands by about one percentile point per year in subsequent years, therefore class size has a larger effect on minority students.

A study conducted by Blatchford *et al*, (2011:728), shows that smaller classes can benefit all pupils in terms of individual, active attention from teachers, but that lower attaining pupils in particular, can benefit from small classes at secondary level. This suggests that small classes can be a valuable educational initiative, right through school, but lower attaining pupils at secondary level could particularly benefit from small classes. If placed in large classes, the evidence is that they will be more prone to go off task and teachers will have to use more time bringing them back on task. Small classes can therefore allow teachers to engage in more individualised teaching, and be used as part of more differentiation of the curriculum as well.

Jepsen (2015:2) disagrees by stating that a simple comparison of achievement across classrooms of different sizes will not reflect the true relationship between class size and student achievement, for a number of reasons. For example, in the US, where the biggest source of funding is local property tax revenue, schools in wealthier areas are more likely to have smaller classes and higher achievement due to students' more advantaged backgrounds, rather than being a causal effect of smaller classes. In contrast, if a school provides smaller classes for its most "at-risk" students, the result

would be higher achievement in the larger classes, again for reasons unrelated to class size.

Jepsen (2015:8) indicates that smaller classes are generally associated with higher student achievement, but the evidence is far from unanimous. The few studies that find no effect of smaller classes use data from similar (if not identical) locations to studies that find positive effects of smaller classes. The studies, by and large, use the same statistical techniques. Thus, advocates of smaller classes cannot simply dismiss the studies finding no effect as being somehow inferior or being confined to particular locations. Reducing class sizes is no guarantee of improved achievement, even though the majority of past research finds such a positive relationship. Even in situations where smaller class sizes are associated with improved student achievement; resources may be better spent on other reforms, such as tutoring, early childhood programs, or improving teacher quality, would be better investments (Jepsen, 2015:8).

Moshoeshoe (2015:1) is of the viewpoint that policy makers often rely on their basic intuition that more school resources (hiring more teachers) lead to better school outcomes, and hence commit huge resource outlays to this end. However, more often than not, countries that spend more on education are not necessarily guaranteed to have better education outcomes than those that spend relatively less. For instance, Swazi and Zimbabwean students outclass Botswana and South African students even though both Botswana and South Africa spend relatively more on education (SASIX, 2011).

Lazear (2001:779) provides a model in which students who attend a smaller class, learn more, because they experience fewer student disruptions during class time, on average. Such a result follows naturally if the probability of a child disrupting a class is independent across children. He assumes that disruptions require teachers to suspend teaching, creating a negative externality that reduces the amount of learning for everyone in the class. There may be other benefits to smaller classes as well. For example, it is possible that spending time in a small class, reduces a student's

propensity to disrupt subsequent classes, because the student learns to behave better with closer supervision, or enables teachers to better tailor instruction to individual students. Another implication of Lazear's model is that the optimal class size is larger for groups of students who are well-behaved, because these students are less likely to disrupt the class. If schools behave optimally, they would reduce class size to the point at which the benefit of further reductions is just equal to their cost. In the bigger picture, the benefits of reducing class size should equal the cost (Lazear, 2001:779).

De Lannoy and Hall (2012:2) explain that in South Africa, the learner-to-educator ratio (LER) contributes directly to the quality of schooling offered. The more crowded the classrooms, the less educators are able to give personal attention to learners to help them along in the learning process. Learners in overcrowded classes may find it difficult to follow the lesson, or to ask questions when they do not understand the material taught. Moreover, in the context of HIV/AIDS and the high number of children affected by the pandemic, educators could play an important role in identifying and supporting children who are particularly vulnerable, and linking them to appropriate support services within or outside the school. The larger the class, the harder it is for educators to know the circumstances of individual learners. The national and provincial average LER's in public schools are within the national and international desired levels – set at a maximum of 40 learners per educator in primary schools and 35 learners per educator in secondary schools (Crouch & Perry, 2003). However, schools – and classes – vary enormously in size, and some educators have classes of 50 learners or more (Phurutse, 2005).

4.4 SUMMARY

As indicated in Chapter 3 the current situation in the South African education system is unacceptable and there are many signs that there is a crisis. With high enrolment rates each year, and poor Grade 12 output, it is clear that all role players must focus on the quality of education. Effective leadership in schools is needed to ensure that teachers attend classes diligently and learners take the importance of education seriously.

Government needs to ensure that teachers are trained accordingly and schools have adequate basic resources.

Several studies (Pritchett & Beatty, 2012; Duflo, 2011, Spaul & Kotze, 2015:13), identify that students in developing countries have large learning deficits. The studies show that even children with relatively high levels of educational attainment often have very few cognitive skills to show for all their years of schooling. This is the result of weaker students falling progressively further and further behind the curriculum, to the extent that they eventually fall so far behind that no learning takes place whatsoever. Effective schools are first and foremost the vehicle through which societies reproduce themselves.

This chapter presented a literature review of the characteristics of effective schools. The chapter addressed the question of what school effectiveness is and how the concept is defined. Characteristics of effective schools were firstly dealt with by describing an effective school, and identifying the main distinguishing characteristics. Throughout the literature there are reoccurring characteristics of effective schools and the most common characteristics were identified to describe successful schools.

The following characteristics were discussed: leadership, high quality teaching, staff development, teaching and learning (emphasis on achievement), parental involvement, monitoring progress (monitoring pupil performance and evaluating school performance), positive reinforcement (discipline and feedback), high expectations, safe and orderly schools, and learner self-esteem. The concept of *school improvement* was also conceptualised and defined.

In Chapter 5 the relationship between these characteristics and the dimensions of entrepreneurial orientation will be investigated to determine whether schools who adopt an entrepreneurial orientation are likely to be more successful and effective. The study was based on 25 secondary in Gauteng, South Africa, which are considered to be

successful, based on Grade 12 results. The intention is to determine whether these schools employ entrepreneurship as a strategy towards success.

CHAPTER 5

RESEARCH METHODOLOGY

5.1 INTRODUCTION

Eyal and Kark (2004:2012) explain that businesses in general (schools more specifically), are currently functioning in a highly competitive global environment. This environment is characterised by rapidly changing technologies. The increase in uncertainty, complexity, and competitiveness; scarceness of resources; and the need for continual change, in both non-profit and for-profit businesses, have made entrepreneurship a vital asset for organisational survival, growth, and productivity. Yemini *et al.* (2015:526) explain that, school principals can be regarded as institutional entrepreneurs, required not only to comply with institutional demands and regulations, but to also take a proactive role in advancing initiatives and changes that reflect their own interests and respond to the needs of their schools.

The primary objective of this study is to assess the extent and impact of entrepreneurial orientation on the perceived success of three selected groups of public secondary schools in Gauteng. The five dimensions of entrepreneurial orientation, namely autonomy, risk-taking, innovativeness, pro-activeness and competitive-aggressiveness, were used as the independent variables to determine its relationship with the dependent variable, *perceived school success*.

The study focuses on public secondary schools in Gauteng, South Africa. Schools were chosen using a convenience sample. Educators were asked to take part in a survey by completing printed questionnaires. For the purpose of this study, the methodology of Zikmund *et al.* (2013:63) was used to analyse the research on the influence of entrepreneurial orientation on the perceived success of schools.

The research design, as well as the conceptual, model are discussed in detail. In this chapter the quantitative methodology, data collection, the development of the questionnaire, methodology of conducting interviews, determining reliability and viability, and methods of data analysis are discussed in line with the methodologies as described by Zikmund *et al.* (2013:63). Upon completion of this research, recommendations to improve the implementation of entrepreneurial orientation in public secondary schools are articulated.

5.2 RESEARCH DEFINED

Research has, according to Kumar (2014:5), multiple meanings and its precise definition varies from discipline to discipline. Across disciplines there seem to be an agreement with respect to the functions it perform; which has to find answers to research questions. Research or scientific enquiry is a procedure by means of which an endeavour is made to obtain answers to questions, and to solve identified problems in a systematic manner with the support of verifiable facts. Zikmund, Babin, Carr and Griffen (2010:6) and Kothari (2004:1) describe research as the application of scientific methods in search of the truth.

Brynard, Hanekom and Brynard (2014:3) show that research is a multidimensional phenomenon and that the interpretations of scientific enquiry are complementary. Leedy and Ormrod (2005:8) define research as a systematic process of collecting, analysing and interpreting information – data - in order to increase our understanding of a phenomenon in which we are interested or concerned about. Formal research, as used in this study, is intentionally set out to enhance the understanding of a phenomenon. As far back as 1923, Redman and Mory define research as a systematic effort to gain new knowledge (Kothari, 2004:1).

Kumar (2014:10) agrees with Leedy and Ormrod (2005:8) but adds that, for a process to qualify to be called research; the process must have certain characteristics and fulfil

some requirements. It must, as far as possible be controlled, rigorously systematic, valid and verifiable, empirical and critical.

Mouton (1996:17-20) identifies four interpretations of scientific investigation:

- The goal of science is the search for truth. How the goal is defined will determine which route should be followed in order to reach the goal.
- Scientific enquiry is a social activity, aimed at solving certain theoretical and empirical problems.
- Scientific investigation is the production or the manufacturing of new knowledge.
- Scientific investigation can be regarded as a “business venture” that has to be properly managed in order to produce the desired goods.

5.3 THE RESEARCH PROCESS

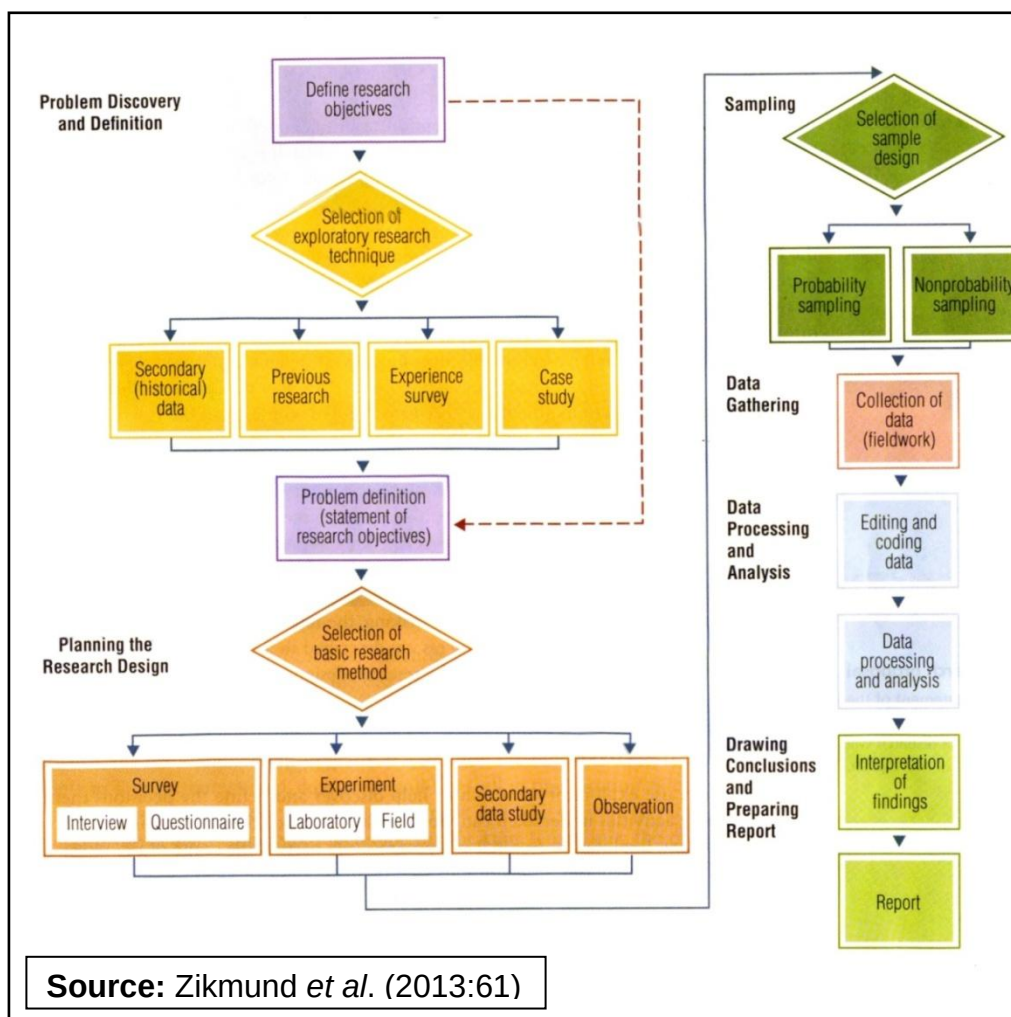
Research involves a sequence of highly interrelated activities. The stages of the research process overlap continuously, and it is clearly an oversimplification to state that every research project has exactly the same ordered sequence of activities. According Zikmund *et al.* (2013:59), research often follows a general pattern. The authors offer the following research stages:

1. Defining the research objectives.
2. Planning a research design.
3. Planning a sample.
4. Collecting the data.

5. Analysing the data.
6. Formulating the conclusions and preparing the report.

Figure 5.1 portrays the above-mentioned six stages as a cyclical or circular-flow process. The circular-flow concept is used because conclusions from research studies can generate new ideas and knowledge that can lead to further investigation. For the purpose of this study, the methodology of Zikmund *et al.* (2013:63) is used to unfold the process of the research; to investigate the influence of entrepreneurial orientation on the perceived success of schools.

Figure 5.1: Flowchart of the research process



5.3.1 Problem discovery and definition

The first step of the six-cycle process is to define the research objectives and to select the exploratory research method.

5.3.1.1 Define research objectives

A problem occurs when there is a difference between the current conditions and a more preferable set of conditions (Zikmund *et al.*, 2013:11). The problem statement identifies the gap in knowledge to be filled (Cooper & Schindler, 2008:83).

The heart of every research project – the axis around which the entire research endeavour revolves – is the problem or question the researcher wants to address. Leedy and Omrod (2016:27) explain that the first step in the research process, then, is to identify this problem or question with clarity and precision. It clarifies the goals of the research project and can keep the researcher from wandering in tangential, unproductive directions. Zikmund *et al* (2013:108) refer to this first step as problem definition, which is the development of a decision statement and the steps involved in translating it into more precise research terminology, including a set of research objectives.

According to Welman *et al.* (2005:13), defining the research problem involves narrowing down our general interest into a research topic, in order to focus on a particular research problem, which is small enough to be investigated. This process leads to the setting of the research questions. In academic research, the classic way to identify a research problem is to consider the literature and identify any gaps. These gaps indicate original areas to research. Zikmund (2003:94) adds that the problem must be clearly defined, and must provide the objective of the study.

As indicated in Chapter 3 of this study, there are many signs that there is a crisis in education in South Africa. With high enrolment rates each year, and an increasingly

poor Grade 12 output it is obvious that the focus must shift to the quality of education. Quantity should, however, also be considered when the majority of those learners who pass Grade 12 do not meet the minimum requirements for university entrance (Modisaotsile, 2012:2). Literature suggests that entrepreneurship is considered to be a driving force of change and innovation, introducing opportunities to achieve efficient and effective performance in both the public and private sectors (Yemini, 2014:527).

Primary and **secondary** objectives were formulated to determine whether entrepreneurial orientation can be presented as an antidote for the current situation in the South African education system.

- **Primary objective**

The primary objective of this study is to assess the level and impact of entrepreneurial orientation on the perceived success of three selected groups of public secondary schools in Gauteng.

- **Secondary objectives**

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

- To obtain insight into entrepreneurship and entrepreneurial orientation by means of a literature study.
- To obtain insight of how public secondary schools operate as entrepreneurial entities.
- To obtain insight around school principals acting as entrepreneurs.
- To gain insight on the current state of education in South Africa.

- To gain insight of the perceived success factors for public schools, by means of a literature study.
- To determine or analyse the relationship between entrepreneurial orientation and the success factors for public secondary schools.
- To determine whether there are significant differences between the school groups in terms of the selected variables.
- To provide recommendations on how to enhance and foster an entrepreneurial climate and culture within public secondary schools.

5.3.1.2 Selection of exploratory research technique

Zikmund *et al.* (2013:54) classify research on the basis of either technique or purpose. Experiments, surveys, and observational studies are just a few common research techniques. Classifying research by its purpose, such as the situations described above, shows how the nature of a decision situation influences the research methodology. The following section introduces the three types of business research, namely: exploratory research, descriptive research and causal research.

- **Exploratory research**

According to Zikmund *et al.* (2013:52), **exploratory research** is conducted to clarify ambiguous situations or discover potential business opportunities. As the name implies, exploratory research is *not* intended to provide conclusive evidence from which to determine a particular course of action. In this sense, exploratory research is not an end unto itself. Usually exploratory research is the first step, conducted with the expectation that additional research will be needed to provide more conclusive evidence. Exploratory research is often used to guide and refine the subsequent research efforts.

Babbie (2013:94) explains that research is done to explore a topic, that is, to start familiarising a researcher with the topic. This approach typically occurs when a researcher examines a new interest, or when the subject of the study itself is relatively new. Exploratory studies are most typically done for three purposes: (1) to satisfy the researcher's curiosity, and desire for better understanding; (2) to test the feasibility of undertaking a more extensive study; and (3) to develop the methods to be employed in any subsequent study. Exploratory research can be used to help identify and clarify the decisions that need to be made.

These preliminary research activities can narrow the scope of the research topic and help transform ambiguous problems into well-defined ones that yield specific research objectives. By investigating any existing studies on the subject, talking with knowledgeable individuals, and informally investigating the situation, the researcher can progressively sharpen the focus of the research. After such exploration, the researcher should know exactly which data to collect during the formal phases of the project, as well as how to conduct the project.

- **Descriptive research**

As the name implies, the major purpose of **descriptive research** is to describe characteristics of objects, people, groups, businesses, or environments. Unlike exploratory research, descriptive studies are conducted after the researcher has gained a firm grasp of the situation being studied. This understanding, which may have been developed in part from exploratory research, directs the study toward specific issues (Zikmund *et al.*, 2013:55).

Cooper and Schindler (2011:18) maintain that a descriptive study tries to discover answers to the questions - who, what, when, where, and sometimes, how. The researcher attempts to describe a subject, often by creating a profile of a group of problems, people or events. Such studies involve the collection of data and the creation of a distribution of the number of times the researcher observes a single event or

characteristic (known as the research variable) or relating the interaction of two or more variables. Descriptive studies may or may not have the potential for drawing powerful inferences. This type of study is popular in research because of its versatility across management disciplines.

- **Causal research**

Causal research seeks to identify cause-and-effect relationships. When something *causes* an effect, it means that it brings it about or makes it happen. The effect is the outcome. According to Zikmund and Babin (2010:16), causal research is the only research that establishes cause and effect relationships. Causal research seeks to identify cause-and-effect relationships (Zikmund *et al.*, 2013:54).

Monette, Sullivan and De Jong (2011:42) argue that one of the more important, yet difficult tasks, in scientific research is the search for causes – that is, the reason *why* particular forms of behaviour occur. Discovering causal relationships is a difficult task, because causality cannot be directly observed. It must rather be inferred from the observation of other factors.

Causality means, explain Monette *et al.* (2011:42), that some independent variable (X) is the factor, or one of several factors, which change produces variation in a dependent variable (Y). Causality can only be inferred. We can observe the relationships among things in the world, and from that we can infer or deduce that changes in one factor are causing changes in another. However, it is always an inference.

To infer the existence of a causal relationship, one must demonstrate the following:

- A statistical association between independent and dependent variables must exist.
- The independent variable must occur prior in time to the dependent variable.

- The relationship between independent and dependent variables must not be spurious; that is, the relationship must not disappear when the effects of other variables are taken into account.

For the purpose of this study, a combination of **descriptive** and **causal** research was conducted. A descriptive study was done to describe the phenomenon of entrepreneurship, entrepreneurial orientation and the current situation in South African schools (Chapters 2–3). By means of descriptive research, the independent variables could be determined. There are also various factors affecting school success. These factors, or dependent variables, are identified in Chapter 4, by means of descriptive research. The independent factors influencing the dependent variables were established by means of causal research, as this is the only type of research that establishes cause-and-effect relationships.

The business researcher can employ techniques from four basic categories to obtain insight and gain a clearer idea of the problem: previous research, pilot studies, case studies, and experience surveys.

5.3.1.2.1 Pilot study

Zikmund *et al.* (2013:63) explain that a **pilot study** is a small-scale research project that collects data from respondents similar to those that will be used in the full study. It can serve as a guide for a larger study or examine specific aspects of the research to see if the selected procedures will actually work as intended. Pilot studies are critical in refining survey questions and reducing the risk that the full study will be fatally flawed.

For the purpose of this study, the researcher recruited willing educators to test the instrument in order to determine whether the survey questions are understandable, meaningful and measure exactly what they were originally intended to measure. It was also important to determine the time needed to complete the questionnaire.

5.3.1.2.2 Previous research

Researchers should firstly investigate previous research to determine whether or not others may have already addressed similar research problems. A similar study was conducted by Malan (2011). The same independent variables (dimensions of entrepreneurial orientation) were used. The dependent variable used during the study was also *perceived school success*, but the literature study, to determine the success factors, was not comprehensive enough and was done haphazardly.

The selected schools, the primary object of research, were very homogeneous. They were all schools that have obtained a pass rate of 100% at the time, for more than five consecutive years. All the schools were well-resourced and in the same privileged geographical area and community.

The recommendations of the study suggest that schools from different categories should be investigated to determine whether success in schools is universal, irrespective of their access to resources, the community that they serve and the background of the learners.

5.3.1.2.3 Secondary data

According to Zikmund *et al.* (2013:160), research projects often begin with **secondary data**, which are gathered and recorded by someone else prior to (and for purposes other than) the current research. Secondary data is usually historical and already assembled. The primary advantage of secondary data is its availability, and is essential in instances when data cannot be obtained using primary data collection procedures.

Ellram and Tate (2016:2) define secondary data as quantitative or qualitative data, which has been collected by someone, other than the researcher, for a different purpose than its intended use in the specific research. There are many different types of secondary

data available. Some of the more commonly used, are existing literature, census data, governmental information, financial data, organisational reports and records.

The secondary data used for the study is presented in a literature study which comprises of Chapters 2 - 4.

5.3.2 Planning the research design

After the formulation of the research problem, which culminated in the primary and secondary objectives, the developing of the research design, as part of the research design stage, must commend. A research design provides a framework for the research that specifies the methods and procedures for collecting and analysing the needed information.

5.3.2.1 Selection of the research design

Research design is the strategy chosen by the researcher to solve the research problem (Bryman & Bell, 2007:28). According to Brynard *et al.* (2014:39), the types of research and research methods are often associated with the field or academic discipline in which the research is conducted. **Quantitative** and **qualitative** research designs are two methodologies that are of utmost importance in all scientific investigations, and are discussed in this section.

- **Qualitative research**

According to Yilmaz (2013:311), qualitative research is deemed 'difficult to define' because of its multifaceted nature, underpinned by different paradigms (Hitchcock & Hughes, 1995:26). Strauss and Corbin (1998:10-11) explain that the term "qualitative research" means any type of research that produces findings, not arrived at by statistical procedures or other means of quantification. Yilmaz (2013:312) defines qualitative research as an emergent, inductive, interpretive, and naturalistic approach to

the study of people, cases, phenomena, social situations, and processes in their natural settings. Its purpose is to reveal, in descriptive terms, the meanings that people attach to their experiences of the world.

Brynard *et al.* (2014:39) furthermore describe qualitative methodology as research that produces descriptive data – generally the participant's own written or spoken words - pertaining to their experience or perception. Usually no numbers or counts are assigned to these observations. The indispensable condition or qualification of qualitative methodology is a commitment to perceiving the world from the point of view of the actor or participant.

- **Quantitative research**

Saunders, Lewis and Thornhill (2012:162) describe quantitative research as generally associated with positivism, especially when used with predetermined and highly structured data collection techniques. This type of research is usually associated with a deductive approach, where the focus is on using data to test theory. However, it may also incorporate an inductive approach where data is used to develop theory. Quantitative research is principally associated with experimental and survey research strategies. A survey research strategy is normally conducted through the use of *questionnaires*.

Mouton (1983:128) explains that quantitative methodology is associated with analytical research. Its purpose is to arrive at a universal statement. Cooper and Schindler (2011:161) agree that quantitative research attempts precise measurement of something. In business research, quantitative methodologies usually measure consumer behaviour, knowledge, opinions, or attitudes. Such methodologies answer questions related to how much, how often, how many, when, and who. Although the survey is not the only methodology for the quantitative researcher, it is considered the dominant one.

Brynard *et al.* (2014:39) explain that in quantitative methodology, the researcher assigns numbers to observations. By counting and measuring “things” and “objects”, data is produced. Quantitative research is underpinned by a distinctive theory as what should pass as warrantable knowledge. It requires methods such as experiments and surveys to describe and explain phenomena. The methods could include techniques, such as observations, preliminary investigations, quantitative analysis and questionnaires.

Kumar (2014:14) believe the quantitative approach is rooted in the philosophy of rationalism, which implies the following:

- The research design follows a rigid, structured, and predetermined set of procedures to explore.
- Aims to qualify the extent of variation in a phenomenon.
- Emphasises the measurement of variables and the objectivity of the process.
- Believes in substantiation, the basis of a large sample size.
- Gives importance to the validity and reliability of findings.
- Communicates findings in an analytical and aggregate manner, drawing conclusions and inferences that can be generalised.

Yilmaz (2013:311) defines quantitative research as research that explains phenomena according to numerical data, which is analysed by means of mathematically based methods, especially statistics. From a broader perspective, it can be defined as a type of empirical research into a social phenomenon or human problem, testing a theory consisting of variables, which are measured by numbers and analysed with statistics, in order to determine if the theory explains or predicts phenomena of interest.

Leedy and Omrod (2016:80) note that data and methodology are inextricably intertwined. For this reason, the methodology chosen for a particular research problem must always take into account the nature of the data that will be collected in the resolution of the problem. According to Yilmaz (2013:315), quantitative research uses questionnaires, surveys and systematic measurements involving numbers. Quantitative researchers use mathematical models and statistics to analyse the data and report their findings in impersonal, third-person prose, by using numbers.

Leedy and Ormrod, (2016:80) explain that quantitative researchers tend to seek explanations and predictions that will generalise to other persons and places. The intent is to identify relationships among two or more variables and then, based on the results, confirm or modify existing theories and practices.

For the current study, it was the logical decision for the researcher to make use of a quantitative research method, for the following reasons:

- The study will be executed through the use of a questionnaire.
- The variables and possible relationships are clear.
- An inductive approach will be followed, where data is used to develop theory.
- The research design will be analytical and will be used to arrive at a universal statement concerning entrepreneurial orientation in all public schools.
- Numbers will be assigned to observations where the entrepreneurial inclination of educators will be measured and analysed.
- The intent of the study is to identify relationships among variables, to confirm or modify current practises.

After the selection of the research approach, the measuring instrument must be developed. The following section explains the process.

5.3.2.1.1 Quantitative instrument: Questionnaire

The gathering of data in quantitative research may range from a simple observation at one location to a grandiose survey of multinational corporations, at sites in different parts of the world. The method selected largely determines how the data is collected. Questionnaires, standardised tests, observational forms, laboratory notes, and instrument calibration logs are among the devices used to record raw data (Cooper & Schindler, 2008:77). Zikmund and Babin (2010:25) concur that data is simply facts or recorded measures of certain phenomena. Information is data formatted to support decision-making or define the relationship between two facts.

Grinnell and Unrau (2008:300), on the other hand, offer that the choice of data collection methods should be based upon the needs of the researcher. Constraints such as budget, human resources and time, should also be taken into consideration.

Babbie (2007: 246) defines questionnaires as a “document containing questions and/or other types of items designed to solicit information appropriate analysis”, or “a collection of questions or statements that allow the researcher to test the attitudes or perceptions on certain issues”. Monette *et al.* (2011:1634) elaborate that the term, survey, both designates a specific way of collecting data, and identifies a broad research strategy. Survey data collection involves gathering information from individuals.

As a broad research strategy, survey research, involves asking questions to a sample of people, in a fairly short period of time, and then testing hypotheses or describing a situation based on their answers. Surveys typically involve collecting data from large samples of people; therefore they are ideal for obtaining data that is representative of populations too large to deal, through other methods. All surveys involve respondents with a series of questions to answer (Monette *et al.*, 2011:164).

The decision to conduct a questionnaire survey should in itself be the culmination of a careful process of thought and discussion, involving consideration of all possible techniques. The concept and variables involved and the relationships being investigated should be clear and should guide the questionnaire design process (Welman and Kruger, 2005:174). A questionnaire contains recorded questions that people respond to directly on the document itself, without the aid of an interviewer or the researcher (Monette *et al.*, 2011:164).

Zikmund and Babin (2010:270) insist that the questionnaire is the primary tool for building responses to research questions. The authors note that questionnaire design is one of the most critical stages in the survey research process. If a researcher asks misguided questions, he or she will get ineffective results. The questions must meet the basic criteria of *relevance* and *accuracy*. A questionnaire is relevant to the extent that all information collected addresses a research question, which will help the decision-maker to address the current marketing problem. Accuracy means that the information is valid.

Struwig and Stead (2001:89) explain that two main types of questionnaires can be developed, namely interviewer-administered questionnaires, and self-administered questionnaires. Questionnaire design is still considered more of an art than a science.

Zikmund *et al.* (2010:362) are of the viewpoint that good questionnaire design is a key to obtaining accurate survey results. Knowing how each question should be phrased, requires some knowledge of the different types of question possibilities. The language should be simple, to allow for variations in educational levels. Researchers should avoid leading or loaded questions, which suggest answers to the respondents, as well as questions that induce them to give socially desirable answers.

Respondents have a bias against questions that suggest changes in the status quo (Zikmund *et al.*, 2010:363). The reluctance to answer personal questions can be reduced by explaining the need for the enquiry, and by assuring respondents of the confidentiality of their replies. The researcher should carefully avoid ambiguity in

questions. Another problem is the double-barrelled question, which asks two questions at once. Researchers need to examine their questions to ensure that these will provide variance in responses.

Neuman (2006:278-281) holds that questions should be designed to assure that the correct data is collected. He warns that jargon, slang and abbreviations should be avoided. Questions should be within the intellectual range of the respondents and no double negatives should be used.

Leedy and Ormrod (2016:80) explain that, because quantitative studies have historically been the mainstream approach to research, carefully structured guidelines exist for conducting them. Concepts, variables, hypotheses and methods of measurement, tend to be defined before the study begins, and remain the same throughout. Quantitative researchers choose methods that allow them to objectively measure the variables of interest. Researchers can also try to remain detached from the phenomena and participants in order to minimise the chances of collecting biased data.

Welman *et al.* (2005:9) are determined that the purpose of quantitative research is to keep the research process as stable as possible. It focuses on the causal aspects of behaviour and the collection of facts that will not change easily.

For the purpose of this study, a measuring instrument in the form of a self-administered *questionnaire* was developed to assess the dependent and independent variables. Operationalisation of the variables was done by using reliable and valid items, obtained from existing measuring instruments used in previous studies, as well as self-generated items based on the literature study.

The quantitative type questionnaire was developed on a 5-point Likert scale. Zikmund *et al.* (2013:316) define Likert scale questions as a measure of attitudes designed to allow respondents to rate how strongly they agree or disagree with statements, ranging from very positive to very negative attitudes toward some object. The Likert scale used in this

study utilised statements such as strongly agree (1), agree (2), neutral view (3), disagree (4) and strongly disagree (5). The respondent had to choose to which extent he or she agreed or disagreed with the research statement provided.

Section A of the questionnaire comprises of a questionnaire developed by Lotz and Van der Merwe (2013:187), which was adapted to measure entrepreneurial orientation within selected public secondary schools in the Gauteng Province. Lotz and Van der Merwe designed a questionnaire founded on the entrepreneurial orientation constructs, as identified by Lumpkin and Dess (2001:442). The questionnaire measures five constructs regarding entrepreneurial orientation. This includes autonomy, innovation, risk-taking, pro-activeness and competitive aggressiveness.

The literature study (Chapters 2, 3 and 4) informed the development of section B of the questionnaire. The literature study has identified 13 dependent variables which are referred to as the set of determinants that predicts the *perceived school success*. These dependent variables are *leadership, high quality teaching and learning, staff development, emphasis on academics, parental involvement, monitoring pupil performance, evaluating school performance, discipline, feedback, high expectations, safe and orderly schools, learner self-esteem and class size*.

Section C depicts data from respondents regarding their profiles and characteristics. The respondents' age, gender, race, highest academic qualification and post level within the specific school were gathered.

5.3.3 Sampling

As indicated in the previous section, the decision was taken to conduct survey research in the form of a structured questionnaire. Figure 5.1 shows that the next step in the research process is to determine the sample design and the study population.

5.3.3.1 Selection of the sample design

Saunders *et al.* (2012:260) indicate that for some research questions, it is impossible to collect data from the entire population. However, the researcher should not assume that a census would necessarily provide more useful results than collecting data from a sample which represents the entire population. Many researchers argue that using sampling makes a higher overall accuracy possible, than a census. Welman and Kruger (2005:56) explain that there is a clear distinction between probability samples and non-probability samples.

The definitions for the different forms of probability and non-probability sampling are provided by Saunders *et al.* (2012:265):

- **Probability sampling:**

Simple random samples: Selection of the sample at random from the sampling frame, using either a computer or random numbers.

Systematic random samples: Selecting the sample at regular intervals from the sampling frame (Saunders *et al.*, 2012:265).

Stratified random samples: This is a modification of random sampling in which the population is divided into two or more relevant and significant strata, based on one or a number of attributes.

Cluster random samples: On the surface, very similar to stratified random sampling, as the population needs to be divided into discrete groups prior to sampling. The groups are termed clusters and can be based on any naturally occurring grouping (Saunders *et al.*, 2012:265).

Multi-stage sampling: This method is a development of cluster sampling. Normally the method is used to overcome problems associated with a geographically dispersed population.

- **Non-probability sampling:**

Quota sampling: This method is entirely non-random and is often used for structured interviews.

Purposive sampling: The researcher needs to use judgment to select cases that will best answer the research questions. This is often also called judgmental sampling (Saunders *et al.*, 2012:283).

Volunteer sampling:

Snowball sampling is used when it is difficult to identify members of the desired population. Self-selection sampling, occurs when the researcher allows each case, usually individuals, to identify their desire to take part in the research. Haphazard sampling occurs when sample cases are selected without any obvious principles of organisation in relation to the research. The most common form is convenience sampling (Saunders *et al.*, 2012:283).

5.3.3.2 Study population and sampling

The next step, as indicated on Figure 5.1, is to determine the study population.

- **Study population**

Cooper and Schindler (2008:90) define a population as the full group of elements a researcher wishes to investigate. The population could be people, events, records or elements that contain the desired information and can provide answers to the

measurement question. Wegner (2007:6) holds that a population is a representative of every possible item that is relevant to a certain study.

In this study, the population was pulled from the Gauteng Province in South Africa. This province is central to South Africa and includes the main cities of Johannesburg and Pretoria. The population comprises of educators and school management teams from selected secondary schools in Gauteng. The full database lists 6772 secondary schools in South Africa, of which 853 are in the Gauteng Province (Department of Basic Education, 2015).

The 25 schools participating in this study were chosen based on the results of their Grade 12 examinations from 2013 - 2015. The selected public secondary schools were selected on the following criteria:

- **Group A**, consists of well-resourced schools that have obtained a 100% pass rate for the past five years. These schools are located in the urban areas of Pretoria, Johannesburg and Randfontein.
- **Group B**, consists of former Model C schools that have obtained a pass rate of 100% in the 2013-2015 Grade 12 examinations. These are ordinary suburban schools located in different areas of Gauteng, serving the immediate population for whom they were originally intended.
- **Group C**, consists of poor township schools that have obtained pass rates well beyond expectation. Some of the schools are located in the townships of Khutsong (Carletonville), Kagiso (Krugersdorp), Kokosi (Fochville) and the peri-urban areas of Randfontein and Krugersdorp. Although this group of schools were selected by means of convenience sampling, they turned out to be a good representation of the population.

For the purpose of completeness, consideration was given to sample size, heterogeneity and homogeneity.

- **Sample size**

Bryman and Bell (2015:198) argue that it is the absolute size of a sample that is important and not its relative size. A large sample cannot *guarantee* precision, so one can assume that the size of a sample increases the *likely* precision of the sample. This means that, as the sample increases, sampling error decreases. Therefore, an important component of any decision about sample size should be how much sampling error a researcher is prepared to tolerate. The less sampling error one is prepared to tolerate, the larger the sample must be.

- **Heterogeneity and homogeneity**

Bryman and Bell (2015:200) explain that another consideration is the homogeneity and the heterogeneity of the population from which the sample will be taken. When the sample is very homogeneous, the amount of variation is less. The implication of this is that, the greater the heterogeneity of a population, the larger the sample needs to be.

The current study is restricted to the Province of Gauteng, South Africa. The researcher has access to schools in this geographical area, thus a convenience sample was chosen based on accessibility. In 2015, all the education districts in Gauteng obtained a pass rate of above 70%. Out of the Top 10 best performing districts in South Africa, seven were in Gauteng (Gauteng Department of Education, 2016). Nationally, in 2015, the Western Cape was the top-performing province (84.7% pass rate), followed by Gauteng (84.2), Free State (81.6%) and North West (81.5%) (Department of Basic Education, 2016). Taking into account these results, the researcher is convinced that the convenience sample from Gauteng is a good representation of the total population of successful schools.

As indicated earlier, the homogeneity and the heterogeneity of the population are important considerations, therefore the groupings of the schools was done accordingly. The schools identified for participation in the study, are very heterogenic, but within the three different groups, homogeneous regarding achievement, area, how well they are resourced, and the communities that they serve. This is important to note, seen in the light of their homogeneity, that the sample required can be smaller (Bryman & Bell, 2015:200).

5.3.4 Data gathering

At this stage of the research design, as indicated on Figure 5.1, the researcher must distribute the survey instrument to gather the wanted data. This section explains the roles of the researcher and the respondents.

There are no set rules or criteria for choosing data collection methods (Maxwell, 2005: 93). Grinnell and Unrau (2008: 300) offer that the choice of data collection methods should be based upon the needs of the researcher. Constraints, such as budget, human resources and time, should also be taken into consideration.

The researcher had to get permission from the Gauteng Department of Education to perform this study. Two important conditions were that no school or educator would be identified during the study, and participation in the study had to be voluntary. After the approval of the application, the principals of the different identified schools were contacted to ask permission to conduct the research in their schools.

Each school appointed a liaison officer between the researcher and the school. The questionnaires were sent to the different schools by courier, and the schools were allowed ten working days to complete the questionnaire, although it was estimated that the time needed to complete a questionnaire was only 15 minutes. Unfortunately some schools only returned the completed questionnaire after one month.

5.3.5 Data processing and analysis

The penultimate step in the research process is the processing and analysing of the gathered data. This section explains the process.

Wegner (2007:33) defines statistical analysis as the procedure to make sense of raw data. Such data must be in an organised and sequential format. It must be accurate and available. Monette, Sullivan and De Jong (2008:364) show that statistical analysis is one of the last steps in the research process.

All research involves some form of data analysis, which refers to deriving some meaning from the observations made during a research project. Data analysis can take many forms. In some cases, it is qualitative, such as a summary description of an investigator's field notes from a participant-observation study. The focus of this study, however, is on quantitative data analysis, in which observations are put into numerical form and manipulated in some way, based on their arithmetic properties. The analysis of quantitative data typically involves the use of statistics, which are procedures for assembling, classifying, tabulating, and summarising numerical data to obtain some meaning from the information (Monette *et al.*, 2011:376).

Rubin and Babbie (2005:552) concur that researchers must convert data to a numerical format, using the process of quantification. This involves converting data into a machine-readable form; a form that can be read and manipulated by computers and similar machines used in quantitative analysis. To conduct a quantitative analysis, researchers often have to engage in a coding process after the data have been collected. The task is to reduce a wide variety of idiosyncratic items of information to a more limited set of attributes that compose a variable.

Aaker, Kumar, Leone and Day (2013:403) explain that data analysis plays an important role in turning all the returned questionnaires into defensible, actionable sets of

conclusions and reports. It is actually a set of methods and techniques that can be used to obtain information and insights from the data.

An understanding of the principles of data analysis is useful for several reasons. Firstly, it can lead the researcher to information and insights that otherwise would not be available. Secondly, it can help avoid erroneous judgements and conclusions. Thirdly, it can provide a background to help interpret and understand analysis conducted by others. Finally, knowledge of the power of data analysis techniques can constructively influence research objectives and research design (Aaker *et al.*, 2013:404).

Although data analysis can be a powerful aid to gaining useful knowledge, it cannot rescue a badly conceived research study. If the research purpose is not well conceived, the research questions are not relevant, or the hypothesis is nonviable or uninteresting; the research will require an abundance of good fortune to be useful. Data analysis rarely can compensate for a bad question, an inadequate sampling procedure, or sloppy fieldwork (Aaker *et al.*, 2013:403).

The first step in analysing the data is to determine the validity and reliability of the selected research instrument. The next section explains the tests for validity and reliability.

5.3.5.1 Reliability and validity

Bryman and Bell (2007:41) explain that validity is concerned with the integrity of the conclusions that are generated from a piece of research and is in many ways the most important criterion of research. Validity is the extent to which the research finding accurately represents what is really happening in the situation (Welman & Kruger, 2005:142). An effect or test is valid if it demonstrates or measures what the researcher thinks or claims it does (Coolican, 1992:35).

Zikmund *et al.* (2013:303) define validity as the accuracy of a measure or to the extent to which a score truthfully represents a concept. Researchers need to know if their measures are valid. The question of validity expresses the researcher's concern with accurate measurement. Validity addresses the problem of whether a measure indeed measures what it is supposed to measure. When a measure lacks validity, any conclusions based on that measure are also faulty.

The purpose of the study is to test the causal relationship between the dependent and independent variables. In other words, to what extent do the independent variables cause or detract from *perceived school success*. It is necessary to test the validity of the data in order to test to which degree the changes in the dependent variable were correctly attributed to the independent variable.

During this study, independent variables that could have a possible negative or positive effect on the dependent variable were identified. According to Welman and Kruger (2005:98), it is necessary to meet the *ceteris paribus* principle (with other conditions remaining the same; other things being equal). This means that there must be a correlation between variables; the cause must precede the effect. It is therefore necessary to eliminate the threat to internal validity. It is necessary to check the reliability and validity of the research tools used, in other words, do the instruments test for the research question.

- **Factor analysis for validity**

Field (2009:786) describes factor analysis as a multivariate technique for identifying whether the correlations between a set of observed variables stem from their relationship to one or more latent variables in the data, each of which takes the form of a linear model. Zikmund *et al.* (2013:650) add that it is an interdependence technique that statistically identifies a reduced number of factors from a larger number of measured variables. Monette *et al.* (2011:361) define it as a complex statistical procedure which correlates each variable with every other variable.

Bryman and Bell (2015:180) explain that a factor analysis is employed in relation to multi-factor measures, to determine whether groups of indicators tend to bunch together to form distinct clusters, referred to as factors. Its main goal is to reduce the number of variables with which the researcher needs to deal. It is used in relation to multiple-item measures, such as Likert scales, to estimate to what extent there is an inherent structure to the large number of items that often make up such measures. Researchers sometimes use factor analysis to establish whether the dimensions of a measure that they expect to exist, can be confirmed. According to Field (2009:628), one of the main uses of a factor analysis is a construct or a questionnaire to measure an underlying variable.

A factor analysis has to be done in order to determine whether different variables are measuring the correct aspects. The factor analysis reduces redundancy by grouping the variables measuring the same items together. Kent (2007:420) describes the factor analysis as loading the correlation between the variables with the factors with which it is mostly associated.

During the current study, a factor analysis was performed to test the validity of the research instrument. Descriptive statistics were conducted to determine the distribution in data, and to determine the normality. The statistics were also used to identify problems with the data.

The Kaiser-Meyer-Olkin measure of sampling adequacy (KMO), can be calculated for individual and multiple variables and represents the ratio of the squared correlation between variables to the squared partial correlation between variables. The Kaiser-Meyer-Olkin test must be done to determine the *appropriateness* of the data for factor analysis (Gurbuz & Aykol, 2009: 327). The KMO statistic varies from 0 to 1. A value of 0 indicates that the sum of the partial correlations in large is relative to the sum of the correlations, indicating diffusion in the pattern of correlations. A value close to one indicates that patterns of correlations are relatively compact and the factor analysis should yield distinct and reliable factors. Allowing values greater than 0.5, are barely

acceptable. Values between 0.5 and 0.7 are mediocre, values between 0.7 and 0.8 are good, values between 0.8 and 0.9 are great and values above 0.9 are superb (Field 2009:647).

Field (2009:647) notes that Bartlett's test of sphericity is used to examine whether the matrix is proportional to an identity matrix (i.e. that the covariance is zero and the variances are roughly equal). Thus, this is a test of the assumption of sphericity. This test examines whether a variance – covariance matrix - is proportional to an identity matrix. Therefore, it effectively tests whether the diagonal elements of the variance-covariance matrix are equal (i.e.group variances are the same), and that the off-diagonal elements are approximately zero (i.e. the dependent variables are not correlated).

Kaiser-Meyer-Olkin measures of sampling adequacy (KMO), as well as a Bartlett's test of sphericity, were conducted. Field (2005:640) explains that the KMO test shows whether the sample is adequate, while the Bartlett's test of sphericity indicates whether the patterns of correlation will yield reliable factors.

The factor analysis was conducted using SPSS computer software. The clusters of variables were arranged in an R-matrix or correlation matrix. Tables of the correlation coefficient between variables were drawn. The purpose of drawing a correlation coefficient is to reduce the amount of variables through grouping them into factors or underlying dimensions (Field, 2009:628). The correlation matrix measures on a scale between 1.0 and -1.0. If there is a perfect positive linear relationship between two holdings, the correlation is 1.0. If there is a perfect negative linear relationship between the two holdings, the correlation coefficient is -1.0. A factor loading of zero means that there is no relationship between the factors.

Welman and Kruger (2001:73) find that in the factor analysis, the correlation matrix is used to determine whether the various questions measure the same factor. The KMO

test, which is an adequacy test, should also test between 1 and 0.5. Anything under 0.5 is unacceptable.

An Oblimin oblique rotation was performed on the principal components of the exploratory factor analysis. To determine the number of factors to be extracted, Kaiser's criterion was used, namely to retain factors with Eigen-values greater than one (Field, 2009:647). A total of 20 items demonstrated sufficient discriminant validity by loading to a sufficient extent. By applying the factor extraction criterion that the Eigen-values must be greater than one (Davis, 2005), four factors were extracted in the exploratory factor analysis, explaining 53.74% of the variance before rotation. After rotation, these factors could be identified as the theoretical dimensions of *innovativeness*, *autonomy*, *pro-activeness* and *competitive aggressiveness*.

One of the dimensions of entrepreneurial orientation, risk-taking, did not have a positive correlation, and it was therefore excluded.

5.3.5.2 Reliability

Bryman and Bell (2007:163) find that reliability tests whether the instrument produces consistent results if the test is repeated. Different types of reliability tests can be done. When a questionnaire is used and analysis is done by correlating two different sets of scores, internal reliability is tested through the Cronbach alpha. The Cronbach alpha test calculates the mean of all reliability coefficients.

Monette *et al.* (2011:119) explain that measures are also evaluated in terms of their reliability, which refers to a measure's ability to yield consistent results each time that it is applied. Reliable measures only fluctuate because of variations in the variable being measured. Field (2009:792) describes it as the ability of a measure to produce consistent results when the same entities are measured under different conditions.

According to Monette *et al.* (2011:119), in general, a valid measure is reliable. Therefore, if researchers were certain of the validity of a measure, they would not need to concern themselves with its reliability. Evidence of validity, however, is always less than perfect, and this is why researchers turn to other ways of evaluating measures, including reliability. Reliability gives more evidence for validity, because a reliable measure may not be valid.

Bryman and Bell (2015:169) explain that Cronbach alpha is a commonly used test of internal reliability. It essentially calculates the average of all split-half reliability coefficients. Computed alpha coefficients will vary between 1 (denoting perfect internal reliability) and 0 (denoting no internal reliability). The figure 0.8 is typically employed as a rule of thumb to denote an acceptable level of internal reliability, though many writers accept a slightly lower figure.

The variance is tested for significance through an ANOVA test and reported in percentages.

5.3.5.3 Variance analyses

In order to analyse variance in the outcome variables, when the predictor variables are at varying hierarchical levels, a ***Hierarchical Linear Modelling*** was performed.

According to Woltman, Feldstain, MacKay and Rocchi (2012:52), Hierarchical Linear Modelling (HLM) is a complex form of Ordinary Least Squares (OLS) regression, which is used to analyse variance in the outcome variables, when the predictor variables are at varying hierarchical levels. Prior to the development of HLM, hierarchical data was commonly assessed using fixed parameter simple linear regression techniques. However, these techniques were insufficient for such analyses due to their neglect of the shared variance. An algorithm to facilitate covariance component estimation for unbalanced data was introduced in the early 1980's. This development allowed for

widespread application of HLM to multilevel data analysis. Following this advancement in statistical theory, HLM's popularity flourished (Raudenbush & Bryk, 2002).

HLM accounts for the shared variance in hierarchically structured data. This technique accurately estimates lower-level slopes and their implementation in estimating higher-level outcomes. HLM is prevalent across many domains, and is frequently used in the education, health, social work, and business sectors. Because development of this statistical method occurred simultaneously across many fields, it has come to be known by several names, including multilevel-, mixed level-, mixed linear-, mixed effects-, random effects-, random coefficient (regression)-, and (complex) covariance components-modelling (Raudenbush & Bryk, 2002). These labels all describe the same advanced regression technique that is HLM. HLM simultaneously investigates relationships within and between hierarchical levels of grouped data, thereby making it more efficient at accounting for variance among variables on different levels, than other existing analyses.

5.3.5.4 Spearman's Correlation Coefficient

As indicated in Table 5.1 on page 240, the 13 possible indicators of perceived school success were grouped together in four main categories. To determine the correlation between the independent variables and the four main categories of perceived school success, a Spearman's rho was performed.

Table 5.1 Categorisation of the dependent variables

School Leadership	Teaching and Learning	Learner Behaviour	Learners
Leadership	Emphasis on academics	Safe and orderly schools	Learner self-esteem
Evaluating school performance	Class size	Discipline	Monitoring pupil performance
Staff development	High quality of teaching and learning	Parental involvement	Feedback
			High expectations

According to Chok (2010:5), Spearman's Correlation Coefficient is also referred to as Spearman's Rank Correlation or Spearman's rho. It is typically denoted with the Greek letter rho (ρ), or r_s . It is one of the few cases where the Greek letter denotes a value of a sample and not the characteristic of the general population. Like all correlation coefficients, Spearman's rho measures the strength of association of two variables. This method is a rank-based version of the Pearson's Correlation Coefficient (denoted p_s). Spearman's Correlation Coefficient varies from -1 to +1 and the absolute values of p_s describe the strength of the monotonic relationship.

Garcia (2010) explains that a positive correlation coefficient indicates a positive relationship between the two variables, while negative correlation coefficients express a negative relationship. A correlation coefficient of 0 indicates that no relationship between the variables exists at all.

The internal reliability of the Spearman's rho is tested through Cronbach's alpha. As previously indicated, reliability tests test whether the instrument produces consistent results if the test is repeated. When a questionnaire is used and analysis is done by correlating two different sets of scores, internal reliability is tested through the Cronbach alpha. (Bryman & Bell, 2015:169).

Table 5.2 Scales on correlation strengths

r values	Strength	Correlation
-1.0 to -0.5 or 1.0 to 0.5	Strong	Practical significant correlation
-0.5 to -0.3 or 0.3 to 0.5	Moderate	Practical visible correlation
-0.3 to -0.1 or 0.1 to 0.3	Weak	Non-significant correlation
-0.1 to 0.1	None or very weak	

Source: Garcia (2010)

5.3.6 Drawing conclusions and preparing report

This section explains the final step in the research process, which comprises of the interpretation of the findings and the final report.

One of the most important tasks that a researcher performs is communicating the research results. This is the final stage of the research project, but it is far from the least important. The conclusions and report preparation stage consists of interpreting the research results, describing the implications, and drawing the appropriate conclusions (Zikmund *et al.*, 2013:70). The reporting for this study is done in Chapter 6, and recommendations are given in Chapter 7.

5.4 SUMMARY

The purpose of Chapter 5 was to outline the research process that was followed in this study, in order to reach the research objectives. The proposed model of Zikmund *et al.* (2013:61) was used to describe all the steps in the research process.

The first step was to determine the research problem and to define the research objectives. The exploratory research included a literature study, as outlined in Chapters 2-4, a pilot study, and the recognition of previous research in the field. The dependent and independent variables were also determined during this phase of the research

process. The five dimensions of entrepreneurial orientation were identified as the independent variables, and 13 perceived school success factors were identified as the dependent variables, but were re-organised into four main groups.

The selection of the research method can be seen as the most important consideration to be taken. Thought was given to the two basic research methods, namely quantitative and qualitative methodology. A survey was identified as the most appropriate method to collect the data, and therefore a quantitative research method was chosen. This was followed by the construction of the quantitative research instrument, the questionnaire. The sample and sample design were decided on and the questionnaires were sent to the different schools for the respondents to complete.

After the completion of the data, the next step of the research process was the processing and analyses of data (see Figure 5.1). A factor analysis was performed to determine the validity of the instrument and Cronbach's alpha was applied to determine the reliability. The results indicated that the instrument was both valid and reliable.

In order to assess whether the independent variables, i.e. *autonomy*, *innovativeness*, *pro-activeness* and *competitive aggressiveness* have an influence on the dependent variables *school leadership*, *teaching and learning*, *learner behaviour* and *learners*; a multiple regression analysis was performed.

The primary unit of measurement is the different schools in the three different categories. It was therefore necessary to perform a Hierarchical Linear Modelling to determine the variances in the effect sizes between the schools in relation to the independent and dependent variables.

During the last step concerning the analyses, Spearman's rho was performed to determine the level of correlation between the independent variables and the four main groups of dependent variables.

The last step of the research process as proposed by Zikmund *et al.* (2013:61) (refer to Figure 5.1), is to draw conclusions and to prepare a report on the findings. This is discussed in detail in Chapters 6 and 7.

CHAPTER 6

RESULTS AND DISCUSSION

6.1 INTRODUCTION

As a result of fast-changing technologies, ever-increasing changes in customer demand and the growing levels of intense global competition (Ireland & Webb, 2009:1), today's business environment is marked by continuous change. Within this new competitive situation, Drejer (2006:143) is of the opinion that the key competitive success factor is the ability of a business to continuously develop new products, processes or services; providing consumers with increased functionality and performance. Consequently, businesses that are not continually innovative may be making the unintentional strategic decision to be out of business within a few years (Ramachandran *et al.*, 2006:86).

In this regard, entrepreneurial orientation represents the processes, practices and decision-making activities that lead to the development and delivery of new innovative products, services and processes (Chang *et al.*, 2007:999), and is consistently suggested in the literature as the key to success and higher performance (Yamada & Eshima, 2009:1). Three dimensions of entrepreneurial orientation, namely *innovativeness*, *pro-activeness* and *risk-taking* have been identified and used consistently in the literature (Rauch *et al.*, 2009:763), based on the earlier research of Miller (1983). Lumpkin and Dess (1996) added two additional dimensions of entrepreneurial orientation, namely *autonomy* and *competitive aggressiveness*.

Chapter 6 analyses and processes the results from the empirical study. Results were evaluated against the literature research done in Chapters 2 through to 4. The empirical study focuses on performing secondary schools in Gauteng. These schools were classified according to the 2014 and 2015 results of their National Senior Certificate examinations.

Through the literature research, the study strived to gain insight into variables impacting on *perceived school success* in the public school system in South Africa. Therefore, the first step was to identify the independent variables that could have an impact on perceived school success in public secondary schools, by means of literature research. The independent variables are the constructs of entrepreneurial orientation: innovativeness, autonomy, risk-taking, pro-activeness and competitive aggressiveness. The 27-item scale developed by Lotz and Van der Merwe (2013) was utilised to measure the independent variables.

The dependent variables measuring the *perceived success* of schools, as derived from the literature, are leadership, high quality teaching and learning, staff development, emphasis on academics, parental involvement, monitoring pupil performance, evaluating school performance, positive reinforcement, discipline, feedback, high expectations, safe and orderly schools, learner self-esteem and class size. The next step was to determine the items that could measure the identified dependent variables.

The impact of entrepreneurial orientation (independent variables) and its importance in achieving perceived school success (dependent variables), were investigated through multiple linear regression analyses. Data to test the impact of the different variables on perceived school success was collected through a survey conducted through questionnaires, sent to different schools.

Questionnaires were used to collect data and the validity and reliability of the measuring instrument was determined through a factor analysis, using Cronbach's alpha coefficient, the Kaiser-Meyer-Olkin measure of sampling adequacy and Bartlett's test of sphericity. The influence of the independent variables on the dependent variable, *perceived school success*, was assessed through correlation coefficients and by determining its significance (*t*-value and *p*-level).

6.2 GATHERING OF DATA

As mentioned above, the empirical study was done by using and adapting a questionnaire developed by Lotz and Van der Merwe (2013:15), to measure entrepreneurial orientation within public secondary schools in Gauteng, South Africa. Furthermore, from the literature study a list of success factors for schools were identified. The identified perceived success factors were grouped into four main categories and then sub-divided into another four categories (See Table 6.1).

Table 6.1: Identified success factors for schools, grouped into four broad factors.

School leadership	Teaching and learning	Learner behaviour	Learners
Leadership	Emphasis on academics	Safe and orderly schools	Learner self-esteem
Evaluating school performance	Class size	Discipline	Monitoring pupil performance
Staff development	High quality of teaching and learning	Parental involvement	Feedback
			High expectations

The questionnaire consisted of the following sections:

Section A measured the entrepreneurial orientation of educators at public secondary schools.

Section B measured the identified success factors within public secondary schools.

Section B-1 measured **school leadership** within the identified schools.

Section B-2 measured the items regarding the quality of **teaching and learning** in schools.

Section B-3 measured **learner behaviour** in schools.

Section B-4 measured **learners'** needs necessary for achievement.

Section C depicted data from respondents regarding their profiles and characteristics. The respondents' age, gender, race, highest academic qualification and post level within the school, were gathered.

The study population consisted of educators teaching at public secondary schools in Gauteng, South Africa. The schools were divided into three groups:

Group A consisted of schools that obtained a 100% pass rate for the last five consecutive years.

Group B consisted of former Model-C schools that obtained a pass rate of 100% in their 2014 and 2015 Grade 12 examinations.

Group C consisted of previously disadvantaged township schools which obtained a pass rate of >90%.

The pass rates taken into account were derived from the official results of the 2014 and 2015 National Senior Certificate examinations.

Due to the sensitive nature of the research and the agreement between the Gauteng Department of Education and the researcher, the participating schools cannot be identified.

The printed questionnaires were distributed to the schools and each institution appointed a liaison officer (in most cases a senior educator) to communicate directly with the researcher. No objections to the research were received from schools, although they were very worried that comparisons would be made. The researcher was only

allowed to conduct the research at the end of February, due to the very tight first term schedules. Schools were given two weeks to complete the questionnaire, although most only completed the process after four weeks.

The data was firstly subjected to an exploratory factor analysis to assess the construct validity of the measuring instrument. This was followed by calculating the Cronbach alpha coefficients to assess the reliability of the measuring instrument. Finally, the relationships between the independent and dependent variables were examined by means of a multiple linear regression analysis.

6.3 RESPONSES

From the target population of 1025 educators, a total of 812 completed questionnaires were received, from which 800 responses were useful. This figure represents a response rate of 78%. The excellent feedback can be attributed to the co-operation of the schools' principals.

The quantitative data from 800 respondents was captured on an Excel spread sheet. Data was analysed by the Statistical Consultation Services, North West University (Potchefstroom campus), through the SPSS Inc (2016) software programme. The results are discussed in the next section.

Table 6.2: Number of useful responses from different groups of schools

Group	Number of schools	Number of responses
A	6	240
B	16	374
C	9	186
	25	800

Table 6.2 presents number of useful responses from the different groups of schools.

6.4 RESULTS OF THE BIOGRAPHICAL INFORMATION OF RESPONDENTS

The biographical information of all respondents was recorded to determine with whom the study deals. The demographics determined for the respondents included: age, gender, race, grading (post level), and highest academic qualifications.

6.4.1 Age group classification of the respondents

Purpose of the question

The purpose of question C 01 (refer to Appendix A) was to determine the age group classification of the respondents participating in the survey. The results were predefined to five age groups.

Results obtained

Table 6.3 presents the age group classification of all the respondents who participated in the study.

Table 6.3: Age group classification of the respondents

Age group	Total	Percentage
Younger than 29 years of age	136	17,000%
Between 30 and 39 years of age	167	20.875%
Between 40 and 49 years of age	198	24.750%
Between 50 and 59 years of age	246	30.750%
60 years and older	52	6.500%
Not indicated	1	0.125%
Total	800	100%

Analysis of results

The majority of respondents (30.75%) were between 50 and 59 years of age. Only 6.5% of the respondents were 60 years and older and nearing retirement age. A total of 24.75% of the respondents were 40 to 49 years of age with 20.875% between the ages of 30 and 39. Only 17% were younger than 29 years of age.

6.4.2 Gender of the respondents

Purpose of the question

The purpose of question C 02 (refer to Appendix A) was to determine and differentiate between the number of male and female participants. The respondents had to select between *male* and *female* in the questionnaire.

Results obtained

Table 6.4 presents the gender classification of all the respondents to the survey.

Table 6.4: Gender of the respondents

Gender	Total	Percentage
Male	208	26%
Female	592	74%
Total	800	100%

Analysis of results

The majority of the respondents (74%) were female, while only 26% were male, proving that there are more female educators in public secondary schools.

6.4.3 Race classification of the respondents

Purpose of the question

The purpose of question C 03 (refer to Appendix A) was to determine and differentiate between the different race groups of the respondents participating in the study.

Results obtained

Table 6.5 presents the race group classification of all the respondents to the survey.

Table 6.5: Race group classification of the respondents

Race	Total	Percentage
Black	123	15.375%
White	668	83.500%
Indian	5	0.625%
Coloured	4	0.500%
Total	800	100%

Analysis of results

The majority of respondents (83.5%) were White. The Black respondents totalled 15.375%, Indians, 0.625%, while Coloured respondents were only 0.5% of the population.

6.4.4 Post level of the respondents

Purpose of the question

The purpose of question C 04 (refer to Appendix A) was to determine the post level of the respondents at their respective schools.

Results obtained

Table 6.6 presents the post level classification of all the respondents to the survey.

Table 6.6: Post level of the respondents

Post level	Total	Percentage
Post level 1 - Educator	634	79.250%
Post level 2 – Head of department	123	15.375%
Post level 3 – Deputy principal	30	3.750%
Post level 4 - Principal	13	1.625%
Total	800	100%

Analysis of results

The majority of respondents (79.25%) were educators on post level 1. A total of 15.375% were heads of departments, while deputy principals on post level 3 represented 3.75% of the respondents and principals 1.625%.

6.4.5 Highest academic qualification of the respondents

Purpose of the question

The purpose of question C 05 (refer to Appendix A) was to determine the highest academic qualification of respondents participating in the study, since educational levels may have a direct impact on the success of a school.

Results obtained

Table 6.7 presents the highest academic qualifications of the respondents.

Table 6.7: Highest academic qualification of the respondents

Qualification	Total	Percentage
Grade 12	19	2.375%
Certificate	15	1.875%
Diploma	175	21.875%
Degree	164	20.500%
Degree + Diploma/Certificate	255	31.875%
Honours Degree	144	18,000%
Master's degree	22	2.750%
PhD	6	0.750%
Total	800	100%

Analysis of results

The majority of respondents (31.875%) had a degree and a diploma/certificate, followed by 21.875% who had diplomas. A total of 20.5% had degrees, 18% had a honours degree, while 2.375% only had Grade 12. Only 2.75% of the respondents were in possession of a master's degree, and 0.75% had a PhD.

6.5 CONSTRUCT VALIDITY OF THE MEASURING INSTRUMENT

Before conducting a multiple regression analysis to assess the relationships between the variables, the number of factors and the items loading onto each factor must be known (Hair, Black, Babin, Anderson & Tatham, 2006). For this reason, an exploratory factor analysis was conducted to identify the unique factors present in the data, before conducting a multiple regression analysis.

Lotz and Van der Merwe (2013) highlight the danger of using scales not validated for a specific country's context. This concern was also highlighted in the international business literature (Knight, 1997:215; Scheepers *et al.*, 2008:2). Even though the

domain of entrepreneurial orientation has received a substantial amount of theoretical and empirical attention (Rauch *et al.*, 2009:762), the vast majority of publications have been published by American authors (Frank, Kessler & Fink, 2010:175). It is therefore important to validate the scales used in this study within the South African context, and also within public secondary schools, by means of an exploratory factor analysis.

In order to conduct the exploratory factor analysis, the data was divided into five models. The first model related to the independent variables, whereas the remaining four models related to the dependent variables. In identifying the factors to extract for each model, the percentage of variance explained and the individual factor loadings were considered.

6.5.1 Independent variables

With regard to the first model (Model A), namely to assess the discriminant validity of the 27 items measuring the entrepreneurial orientation of the respondents at secondary public schools, an exploratory factor analysis was conducted. Two tests, namely Bartlett's test of sphericity and the Kaiser-Meyer-Olkin measure of sampling adequacy, were considered important in determining the appropriateness of the data for factor analysis (Gürbüz & Aykol, 2009:327).

An Oblimin oblique rotation was performed on the principal components of the exploratory factor analysis. To determine the number of factors to be extracted, Kaiser's criterion was used, namely to retain factors with Eigen-values greater than one (Field, 2009:647). A total of 20 items demonstrated sufficient discriminant validity, by loading to a sufficient extent. The data measuring the entrepreneurial orientation yielded a sampling adequacy of 0.925, while the Bartlett's test of sphericity yielded a *p*-value of smaller than 0.001, indicating that patterns of correlations are compact and that factor analyses should yield reliable factors (Field, 2009:647). The factor matrix of the remaining 20 items is provided in Table 6.8.

Table 6.8: Oblimin rotated factor matrix: Entrepreneurial orientation

Item	Component			
	Innovativeness	Competitive aggressiveness	Autonomy	Pro-activeness
Inno 2	0.818	0.161	0.038	-0.107
Inno 4	0.756	-0.028	0.037	0.002
Inno 3	0.748	-0.011	-0.005	0.003
Inno 1	0.695	0.081	0.036	-0.163
Inno 5	0.592	-0.174	-0.108	0.062
Inno 6	0.572	-0.132	0.133	0.038
Inno 8	0.540	0.019	0.188	-0.167
Inno 9	0.403	0.018	0.292	-0.210
Comp 2	0.036	-0.799	-0.019	0.017
Comp 3	0.011	-0.779	0.065	0.012
Comp 1	-0.039	-0.588	-0.002	-0.235
Comp 4	0.083	-0.442	0.138	-0.122
Auto 2	0.030	0.105	0.733	-0.057
Auto 3	0.017	-0.068	0.650	-0.081
Auto 4	0.044	-0.063	0.637	0.058
Auto 1	-0.073	0.013	0.558	-0.010
Auto 5	0.135	-0.126	0.391	0.086
Proac 2	0.085	-0.177	0.059	-0.687
Proac 1	0.188	-0.143	0.017	-0.656
Proac 3	0.353	-0.198	0.011	-0.401
Cronbach's alpha	0.897	0.810	0.757	0.872

(1) Loadings greater than 0.35 were considered significant

(2) The items included in the factor analysis are provided in Appendix B

By applying the factor extraction criterion that the Eigen-values must be greater than one (Davis, 2005), four factors were extracted in the exploratory factor analysis,

explaining 53.74% of the variance before rotation. After rotation, these factors could be identified as the theoretical dimensions of *innovativeness*, *competitive aggressiveness*, *autonomy* and *pro-activeness*.

One of the dimensions of entrepreneurial orientation, *risk-taking*, was not extracted as a factor. The reason is unclear but one can assume educators may feel that public schools are state entities and the provincial or national governments must be the risk-bearers.

Factor 1 labelled *innovativeness*, comprised of eight items. Eight of the nine items (Inno 2; Inno 4; Inno 3; Inno 1; Inno 5; Inno 6; Inno 8; and Inno 9) were used to measure the latent variable, *innovativeness* (refer to Table 6.8). This loaded significantly onto factor 1, as expected. One item, Inno7, did not load significantly, thus it was deleted. For the purpose of this study, *innovativeness* refers to the regular implementation of new services/subjects/sport codes/processes, the increase in the number of services/subjects/sport codes/processes during the past two years, and the extent to which these new services/subjects/sport codes/processes added significant value over the past few years.

The second factor, labelled *competitive aggressiveness*, comprised of four items. All four items (Comp 2; Comp 3; Comp 1; and Comp 4) were intended to measure the latent variable, *competitive aggressiveness* (Table 6.2). This loaded onto the factor as was expected. In this regard, *competitive aggressiveness* refers to when an aggressive posture is assumed, not only against competitors, but also against any industry trends that may compromise survival or competitive position.

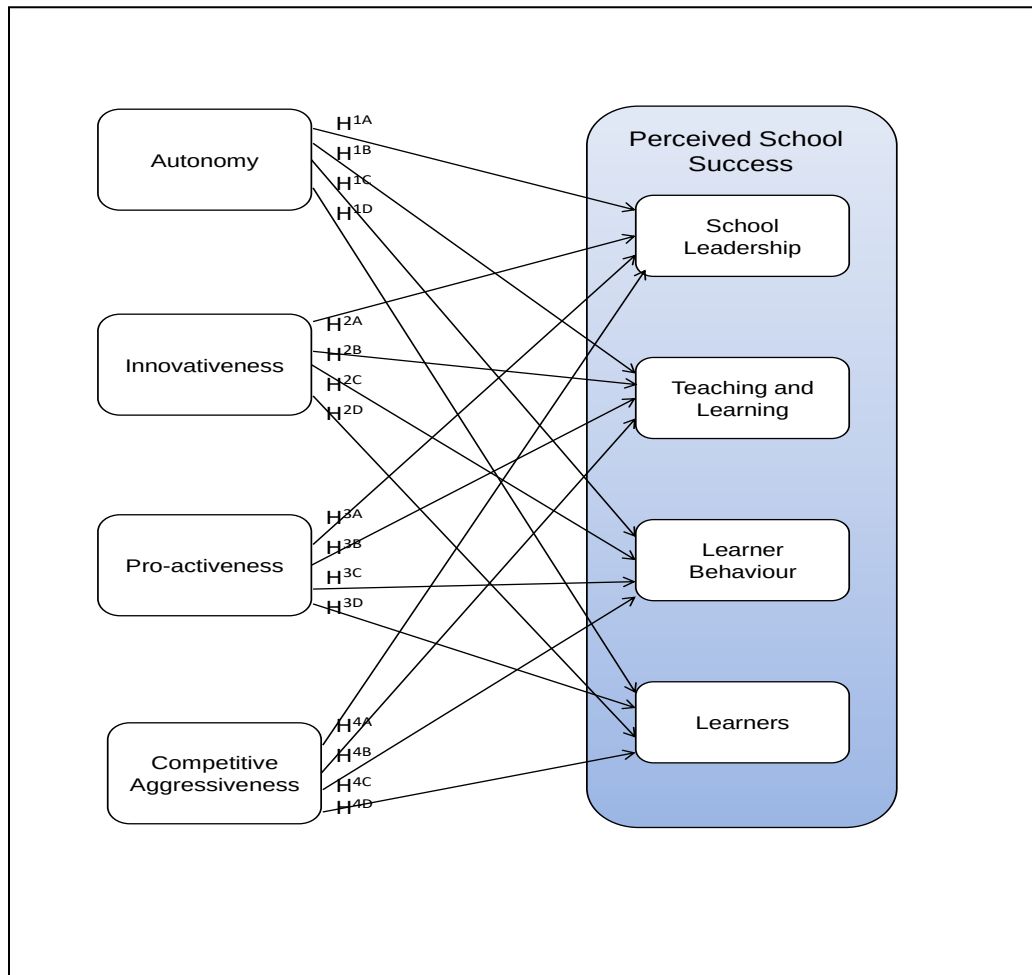
The third factor, labelled *autonomy*, comprises of five items. All five of the items (Auto 2; Auto 3; Auto 4; Auto 1; and Auto 5) were used to measure the latent variable, *autonomy* (Table 6.8), which loaded significantly onto factor 3. *Autonomy* refers to employees being encouraged to manage their own work without continual supervision, and being allowed flexibility to be creative and try different methods to complete their tasks.

The fourth factor, which comprised of three items, was labelled *pro-activeness*. Three of the four items (Proac 2; Proac 1; and Proac 3) were intended to measure the latent variable *pro-activeness*, loaded onto the factor (Table 6.8). One item, Proac 4, was deleted, as there was no positive correlation. For the purpose of this study, *pro-activeness* refers to the continuous monitoring of market trends and future needs of customers; opportunities created by these trends; needs that are pursued; existing products/services which are continuously improved; and new products/services that are continually provided.

The statements (items) measuring the four latent variables are provided in Appendix B.

After the exploratory factor analysis was conducted on the independent variables, the researcher was able to adjust the theoretical model, after one of the dimensions of entrepreneurial orientation, *risk-taking*, was not extracted as a factor (Depicted in Figure 6.1).

Figure 6.1 Adjusted theoretical framework



6.5.1.1 Adjusted research hypothesis

Risk-taking was not extracted therefore a new set of research hypotheses was formulated to summarise the various relationships depicted in the adjusted hypotheses model (Figure 6.1).

H^{1A}: There is a positive relationship between the implementation of *autonomy* in the school environment and *school leadership* in the participating secondary schools.

- H^{1B}: There is a positive relationship between the implementation of *autonomy* in the school environment and *teaching and learning* in the participating secondary schools.
- H^{1C}: There is a positive relationship between the implementation of *autonomy* in the school environment and *learner behaviour* in the participating secondary schools.
- H^{1D}: There is a positive relationship between the implementation of *autonomy* in the school environment and *learners* in the participating secondary schools.
- H^{2A}: There is a positive relationship between the implementation of *innovativeness* in the school environment and *school leadership* in the participating secondary schools.
- H^{2B}: There is a positive relationship between the implementation of *innovativeness* in the school environment and *teaching and learning* in the participating secondary schools.
- H^{2C}: There is a positive relationship between the implementation of *innovativeness* in the school environment and *learner behaviour* in the participating secondary schools.
- H^{2D}: There is a positive relationship between the implementation of *innovativeness* in the school environment and *learners* in the participating secondary schools.
- H^{3A}: There is a positive relationship between the implementation of *pro-activeness* in the school environment and *school leadership* in the participating secondary schools.
- H^{3B}: There is a positive relationship between the implementation of *pro-activeness* in the school environment and *teaching and learning* in the participating secondary schools.

- H^{3C}: There is a positive relationship between the implementation of *pro-activeness* in the school environment and *learner behaviour* in the participating secondary schools.
- H^{3D}: There is a positive relationship between the implementation of *pro-activeness* in the school environment and *learners* in the participating secondary schools.
- H^{4A}: There is a positive relationship between the implementation of *competitive aggressiveness* of the school and *school leadership* in the participating secondary schools.
- H^{4B}: There is a positive relationship between the implementation of *competitive aggressiveness* of the school and *teaching and learning* in the participating secondary schools.
- H^{4C}: There is a positive relationship between the implementation of *competitive aggressiveness* of the school and *learner behaviour* in the participating secondary schools.
- H^{4D}: There is a positive relationship between the implementation of *competitive aggressiveness* of the school and *learners* in the participating secondary schools.

6.5.2 Dependent variables

With regard to the next four models (school leadership, teaching and learning, learner behaviour and learners), the same methodology was used. To assess the discriminant validity of the items measuring the *perceived school success*, exploratory factor analyses were conducted. Two tests were conducted on each model, namely Bartlett's test of sphericity and the Kaiser-Meyer-Olkin measure of sampling adequacy. These were considered important in determining the appropriateness of the data for factor

analysis (Gürbüz & Aykol, 2009:327). Cronbach's alpha coefficients were calculated to assess the reliability (internal consistency) of the various scales.

- **School leadership (Model B)**

The data measuring school leadership as a component of the *perceived success*, yielded a sampling adequacy of 0.948, while the Bartlett's test of sphericity yielded a *p*-value smaller than 0.001. This indicates that patterns of correlations are compact and that the factor analysis should yield reliable factors (Field, 2009:647).

To identify the number of factors to be extracted, Kaiser's criterion was used, namely to retain factors with Eigen-values greater than one (Field, 2009). A total of 22 of the 22 items measuring ***school leadership***, demonstrated sufficient discriminant validity, by loading to a sufficient extent onto the *school leadership* factor. All factor loadings greater than 0.35 were considered significant (Field, 2009:637; Stevens, 1992:382-384). One item (Staff 1) loaded significantly (values greater than 0.35) onto two factors, namely *leadership* and *staff development*. Rather than deleting the item, it was decided to classify it under the factor that has the highest relevance, *staff development*. Table 6.9 summarises the results.

Table 6.9: Oblimin rotated factor matrix: School leadership

School leadership (Model B)			
Item	Leadership (B-1)	Evaluating school performance (B-2)	Staff development (B-3)
Lead 2	0.840	0.035	-0.118
Lead 8	0.793	-0.036	0.084
Lead 11	0.782	-0.024	0.092
Lead 3	0.770	0.050	-0.112
Lead 5	0.754	-0.011	0.023
Lead 9	0.724	0.030	0.047
Lead 4	0.714	0.086	-0.104
Lead 1	0.692	0.072	0.010
Lead 10	0.684	0.001	0.135
Lead 6	0.646	-0.065	0.150
Lead 7	0.638	0.006	0.187
Eva 3	0.033	0.875	0.007
Eva 2	0.008	0.774	0.013
Eva 1	-0.009	0.709	0.033
Eva 4	0.141	0.691	0.112
Staff 4	0.046	-0.028	0.711
Staff 3	0.159	-0.026	0.678
Staff 6	-0.070	0.095	0.640
Staff 7	-0.030	0.192	0.620
Staff 5	-0.017	0.168	0.578
Staff 2	0.240	-0.045	0.570
Staff 1	0.405	-0.030	0.393
Cronbach alpha	0.936	0.879	0.866

(1) Loadings greater than 0.35 were considered significant

(2) The items included in the factor analysis are provided in Appendix B

Leadership (B-1)

Leadership (Model B-1) comprised of eleven items. All 11 items (Lead 2; Lead 8; Lead 11; Lead 3, Lead 5; Lead 9; Lead 4; Lead 1; Lead 10; Lead 6; and Lead 7) intended to measure school leadership, loaded onto Model B-1 (refer to Table 6.9). School leaders improve teaching and learning indirectly and most powerfully through their influence on staff motivation, commitment and working conditions. School leaders must create an environment where the learning experience of learners can be maximised by the efficient and effective use of learning time, the focus on basic skills, mutual trust and respect, professionalism, safety and discipline.

Evaluating school performance (Model B-2)

The second factor of Model B, labelled *evaluating school performance*, comprised of four items (Table 6.9). All four items (Eval 1; Eval 2; Eval 3; and Eval 4), originally intended to measure evaluating school performance loaded onto this factor. *Evaluating school performance* (school self-evaluation) is a procedure involving systematic information gathering, initiated by the school with the intention to assess the functioning of the school for supporting decision-making, organisational learning and for fostering school improvement.

Staff development (Model B-3)

With regard to the third factor of Model B, labelled *staff development*, all of the seven items (Staff 4; Staff 3; Staff 6; Staff 7; Staff 5; Staff 2; and Staff 1) loaded onto this factor (Table 6.9). *Staff development* can be defined as the uptake of formal and informal learning opportunities that deepen and extend teachers' professional competence, including knowledge, beliefs, motivation and self-regulatory skills.

After performing the exploratory factor analysis on the variable, *school leadership*, the hypotheses were expanded to the following:

- H^{1A1}: There is a positive relationship between the implementation of *autonomy* in the school environment and *leadership* in the participating secondary schools.
- H^{1A2}: There is a positive relationship between the implementation of *autonomy* in the school environment and *evaluating school performance* in the participating secondary schools.
- H^{1A3}: There is a positive relationship between the implementation of *autonomy* in the school environment and *staff development* in the participating secondary schools.
- H^{2A1}: There is a positive relationship between the implementation of *innovativeness* in the school environment and *leadership* in the participating secondary schools.
- H^{2A2}: There is a positive relationship between the implementation of *innovativeness* in the school environment and *evaluating school performance* in the participating secondary schools.
- H^{2A3}: There is a positive relationship between the implementation of *innovativeness* in the school environment and *staff development* in the participating secondary schools.
- H^{3A1}: There is a positive relationship between the implementation of *pro-activeness* in the school environment and *leadership* in the participating secondary schools.
- H^{3A2}: There is a positive relationship between the implementation of *pro-activeness* in the school environment and *evaluating school performance* in the participating secondary schools.

H^{3A3}: There is a positive relationship between the implementation of *pro-activeness* in the school environment and *staff development* in the participating secondary schools.

H^{4A1}: There is a positive relationship between the implementation of *competitive aggressiveness* of the school and *leadership* in the participating secondary schools.

H^{4A2}: There is a positive relationship between the implementation of *competitive aggressiveness* of the school and *evaluating school performance* in the participating secondary schools.

H^{4A3}: There is a positive relationship between the implementation of *competitive aggressiveness* of the school and *staff development* in the participating secondary schools

- **Teaching and learning (Model-C)**

To assess the discriminant validity of the items measuring *teaching and learning*, exploratory factor analyses were conducted. The same methodology was followed and Bartlett's test of sphericity and the Kaiser-Meyer-Olkin measure of sampling adequacy were performed. Cronbach's alpha coefficients were calculated to assess the reliability (internal consistency) of the various scales.

Table 6.10: Oblimin rotated factor matrix: Teaching and learning

Teaching and learning (Model C)			
Item	Emphasis on academics (C-1)	Class size (C-2)	High quality of teaching and learning (C-3)
Acad 7	0.827	0.060	-0.045

Acad 3	0.786	-0.069	-0.077
Acad 6	0.774	0.014	0.023
Acad 1	0.687	-0.031	0.003
Acad 5	0.605	0.008	0.164
Acad 2	0.589	0.052	0.096
Clssiz 2	0.002	0.761	-0.020
Clssiz 1	-0.022	0.758	0.000
Qual 2	-0.084	-0.005	0.907
Qual 3	-0.035	-0.005	0.855
Qual 1	0.020	-0.063	0.761
Qual 4	0.160	0.093	0.530
Qual 5	0.256	0.044	0.455
Cronbach's alpha	0.809	0.729	0.860

- (1) Loadings greater than 0.35 were considered significant
(2) The items included in the factor analysis are provided in Appendix B

The data measuring *teaching and learning* as a variable measuring the *perceived success* yielded a sampling adequacy of 0.892, while the Bartlett's test of sphericity yielded a *p*-value smaller than 0.001, indicating that patterns of correlations are compact and that the factor analysis should yield reliable factors (Field, 2009:647).

A total of 13 out of the 18 items measuring *teaching and learning*, demonstrated sufficient discriminant validity by loading to a sufficient extent onto the *teaching and learning* factor. Factor loadings, greater than 0.35, were considered significant (Field, 2009:637; Stevens, 1992:382-384). One item (Staff 1) loaded significantly (values greater than 0.35) onto two factors, namely *leadership* and *staff development*. Rather than deleting the item, it was decided to classify it under the factor that has the highest relevance, *staff development*. Table 6.10 summarises the results.

Emphasis on academics (Model C-1)

Model C-1 labelled *emphasis on academics*, comprised of six items. Six of the seven items (Acad 7; Acad3; Acad6; Acad1; Acad5; and Acad 2) intended to measure the variable *teaching and learning*, loaded onto Model C-1 (refer to Table 6.10). One item Acad 4, did not load significantly and was therefore deleted. Academic emphasis is defined as a school's campaign for academic excellence, which is significantly related to student achievement.

Class Size (Model C-2)

Model C-2, labelled *class size*, comprised of two items. Two items (Clssiz 2; and Clssiz 1) intended to measure the variable, *class size*, loaded onto Model C-2. (Refer to Table 6.10). For the purpose of this study, *class size* refers to the number of learners in a single class, as smaller classes should allow teachers to provide more attention to each student, and reduce time spent on disciplining students, thus increasing learning.

High Quality of teaching and learning (Model C-3)

With regard to Model C-3, labelled *high quality of teaching and learning*, five items (Qual 2; Qual3; Qual1; Qual 4; and Qual 5) loaded onto this factor. Four items (Qual 6; Qual 7; Qual 8; and Qual 9) intended to measure *high quality of teaching and learning*, did not load significantly and were therefore deleted (Table 6.10). *High quality of teaching and learning* can be defined as that which leads to improved student achievement, using outcomes that matter to their future success. Good quality teaching involves a combination of content knowledge, quality of instruction, classroom climate, classroom management, teacher beliefs and the professional behaviour of educators.

After performing the exploratory factor analysis on the variable *teaching and learning*, the hypotheses were expanded to the following:

- H^{1B1}: There is a positive relationship between the implementation of *autonomy* in the school environment and *emphasis on academics* in the participating secondary schools.
- H^{1B2}: There is a positive relationship between the implementation of *autonomy* in the school environment and *class size* in the participating secondary schools.
- H^{1B3}: There is a positive relationship between the implementation of *autonomy* in the school environment and *high quality of teaching and learning* in the participating secondary schools.
- H^{2B1}: There is a positive relationship between the implementation of *innovativeness* in the school environment and *emphasis on academics* in the participating secondary schools.
- H^{2B2}: There is a positive relationship between the implementation of *innovativeness* in the school environment and *class size* in the participating secondary schools.
- H^{2B3}: There is a positive relationship between the implementation of *innovativeness* in the school environment and *high quality of teaching and learning* in the participating secondary schools.
- H^{3B1}: There is a positive relationship between the implementation of *pro-activeness* in the school environment and *emphasis on academics* in the participating secondary schools.
- H^{3B2}: There is a positive relationship between the implementation of *pro-activeness* in the school environment and *class size* in the participating secondary schools.
- H^{3B3}: There is a positive relationship between the implementation of *pro-activeness* in the school environment and *high quality of teaching and learning* in the participating secondary schools.

H^{4B1}: There is a positive relationship between the implementation of *competitive aggressiveness* of the school and *emphasis on academics* in the participating secondary schools.

H^{4B2}: There is a positive relationship between the implementation of *competitive aggressiveness* of the school and *class size* in the participating secondary schools.

H^{4B3}: There is a positive relationship between the implementation of *competitive aggressiveness* of the school and *high quality of teaching and learning* in the participating secondary schools

- **Learner behaviour (Model-D)**

To assess the discriminant validity of the items measuring *learner behaviour*, exploratory factor analyses were conducted. The same methodology was followed therefore Bartlett's test of sphericity and the Kaiser-Meyer-Olkin measure of sampling adequacy were performed. Cronbach's alpha coefficients were calculated to assess the reliability (internal consistency) of the various scales.

Table 6.11: Oblimin rotated factor matrix: Learner behaviour

Learner behaviour (Model-D)			
Item	Safe schools (D-1)	Discipline (D-2)	Parental involvement (D-3)
Safe 6	0.738	-0.009	-0.002
Safe 5	0.727	-0.016	-0.004
Safe 2	0.594	0.163	-0.004
Safe 4	0.519	0.242	0.066
Safe 3	0.514	0.042	0.164

Disc 5	0.458	-0.040	0.101
Disc 1	0.120	0.717	-0.047
Paren 1	-0.040	0.539	0.294
Disc 4	0.073	0.476	0.020
Safe 1	0.335	0.408	-0.084
Disc 2	0.306	0.385	0.062
Paren 6	0.149	-0.088	0.769
Paren 3	0.001	-0.125	0.762
Paren 7	0.021	0.176	0.711
Paren 8	-0.030	0.239	0.670
Paren 5	0.263	-0.222	0.649
Paren 2	-0.116	0.255	0.629
Paren 4	0.172	-0.088	0.625
Cronbach's alpha	0.801	0.731	0.884

(1) Loadings greater than 0.35 were considered significant

(2) The items included in the factor analysis are provided in Appendix B

The data measuring ***learner behaviour*** as a component of the *perceived success*, yielded a sampling adequacy of 0.894. The Bartlett's test of sphericity yielded a *p*-value smaller than 0.001, indicating that patterns of correlations are compact and that the factor analysis should yield reliable factors (Field, 2009).

A total of 18 of the 21 items measuring ***learner behaviour***, demonstrated sufficient discriminant validity by loading to a sufficient extent onto the ***learner behaviour*** factor. Factor loadings, greater than 0.35, were considered significant (Field, 2009:637; Stevens, 1992:382-384). Table 6.11 summarises the results.

Safe and orderly schools (Model D-1)

Model D-1, labelled *safe and orderly schools*, comprised of six items. Five of the six items (Safe 6; Safe 5; Safe 2; Safe 4; and Safe 3); intended to measure the original

variable, *safe and orderly schools*, loaded onto Model D-1 (refer to Table 6.11). One item, Disc 5, intended to measure the dependent variable *discipline*, loaded onto *safe and orderly schools*. For the purpose of this study, a safe school may be defined as one that is free of danger and where there is an absence of possible harm; a place in which non-educators, educators and learners may work, teach and learn, without fear of ridicule, intimidation, harassment, humiliation, or violence. A safe school is therefore a healthy school, in that it is physically and psychologically safe.

Discipline (Model D-2)

Model D-2 labelled *discipline*, comprised of five items. Three of the eight items (Disc 1; Disc 4; and Disc 2) intended to measure the original variable, *discipline*, loaded onto Model D-2 (refer to Table 6.11). Item Paren 1, originally intended to load onto *parental involvement*, loaded onto *discipline*. Item Safe 1 originally intended to load onto *safe and orderly schools*, also loaded onto *discipline*. Three items, Disc 3, Disc 6, and Disc 7, intended to measure *discipline*, did not load significantly and were subsequently deleted. For the purpose of this study, *discipline* underpins every aspect of school life. A disciplined environment is an environment free of any disruptive behaviour, which mostly relates to behaviour or action by learners that may negatively affect their education or that may interfere detrimentally with the atmosphere conducive to learning in the classroom, or any other school activity.

Parental involvement (Model D-3)

Model D-3, labelled *parental involvement*, comprised of eight items. Seven items (Paren 6; Paren 3; Paren 7; Paren 8; Paren 5; Paren 2; and Paren 4) loaded onto this factor. One item, Paren 1, intended to measure *parental involvement*, loaded onto *discipline* (Table 6.11). *Parental involvement* refers to parents' participation in their children's education. Increased parental involvement has many positive implications, including increased achievement levels.

After performing the exploratory factor analysis on the variable *learner behaviour*, the hypotheses were expanded to the following:

H^{1C1}: There is a positive relationship between the implementation of *autonomy* in the school environment and *safe and orderly schools* in the participating secondary schools.

H^{1C2}: There is a positive relationship between the implementation of *autonomy* in the school environment and *discipline* in the participating secondary schools.

H^{1C3}: There is a positive relationship between the implementation of *autonomy* in the school environment and *parental involvement* in the participating secondary schools.

H^{2C1}: There is a positive relationship between the implementation of *innovativeness* in the school environment and *safe and orderly schools* in the participating secondary schools.

H^{2C2}: There is a positive relationship between the implementation of *innovativeness* in the school environment and *discipline* in the participating secondary schools.

H^{2C3}: There is a positive relationship between the implementation of *innovativeness* in the school environment and *parental involvement* in the participating secondary schools.

H^{3C1}: There is a positive relationship between the implementation of *pro-activeness* in the school environment and *safe and orderly schools* in the participating secondary schools.

H^{3C2}: There is a positive relationship between the implementation of *pro-activeness* in the school environment and *discipline* in the participating secondary schools.

H^{3C3}: There is a positive relationship between the implementation of *pro-activeness* in the school environment and *parental involvement* in the participating secondary schools.

H^{4C1}: There is a positive relationship between the implementation of *competitive aggressiveness* of the school and *safe and orderly schools* in the participating secondary schools.

H^{4C2}: There is a positive relationship between the implementation of *competitive aggressiveness* of the school and *discipline* in the participating secondary schools.

H^{4C3}: There is a positive relationship between the implementation of *competitive aggressiveness* of the school and *parental involvement* in the participating secondary schools

- **Learners (Model E)**

To assess the discriminant validity of the items measuring *learners*, exploratory factor analyses were conducted. Bartlett's test of sphericity and the Kaiser-Meyer-Olkin measure of sampling adequacy were performed. Cronbach's alpha coefficients were calculated to assess the reliability (internal consistency) of the various scales.

Table 6.12: Oblimin rotated factor matrix: Learners

Learners (Model E)				
Item	Learner self-esteem (E-1)	Monitoring pupil performance (E-2)	Feedback (E-3)	High expectations (E-4)
Lnrself 2	0.825	-0.025	-0.012	-0.044

Lnrself 1	0.729	-0.016	0.004	-0.010
Lnrself 3	0.662	-0.036	0.006	0.006
Lnrself 5	0.629	-0.007	0.054	0.062
Lnrself 4	0.483	0.007	0.044	0.029
Moni 4	-0.080	-0.820	0.036	-0.008
Moni 3	0.034	-0.785	0.023	0.027
Moni 5	-0.054	-0.755	0.020	-0.070
Moni 2	0.099	-0.695	0.001	0.018
Moni 1	0.212	-0.655	0.055	0.058
Moni 6	0.031	-0.462	-0.035	0.074
Feed 3	0.046	0.057	0.929	-0.027
Feed 2	-0.061	-0.012	0.749	0.042
Feed 1	0.095	-0.146	0.548	0.028
High 4	0.024	0.023	0.053	0.699
High 3	-0.102	-0.019	0.007	0.669
High 2	0.095	-0.032	0.031	0.520
High 1	0.291	-0.057	-0.011	0.472
Cronbach's alpha	0.809	0.847	0.819	0.739

- (1) Loadings greater than 0.35 were considered significant
(2) The items included in the factor analysis are provided in Appendix B

The data measuring **learners** as a component of *perceived success* yielded a sampling adequacy of 0.908, while the Bartlett's test of sphericity yielded a *p*-value smaller than 0.001, indicating that patterns of correlations are compact and that the factor analysis should yield reliable factors (Field, 2009).

A total of 18 of the 19 items measuring **learners**, demonstrated sufficient discriminant validity by loading to a sufficient extent onto the **learners** factor. Factor loadings, greater than 0.35, were considered significant (Field, 2009:637; Stevens, 1992:382-384). Table 6.12 summarises the results.

Learner self-esteem (Model E-1)

Model E-1, labelled *learner self-esteem*, comprised of five items. All five items (Lnrself 2; Lnrself 1; Lnrself 3; Lnrself 5; and Lnrself 4) intended to measure the original variable, *learner self-esteem*, loaded onto Model E-1 (refer to Table 6.12). Self-esteem is a positive or negative orientation towards oneself, an overall evaluation of one's worth or value. Self-esteem, as an overall reflection of an individual's self-worth, encompasses beliefs about oneself, as well as an emotional response to those beliefs.

Monitoring pupil performance (Model E-2)

Model E-2, labelled *monitoring pupil performance*, comprises of six items. All six of the items (Moni 4; Moni 3; Moni 5; Moni 2; Moni 1; and Moni 6) intended to measure the variable, *monitoring pupil performance*, loaded onto Model E-2 (refer to Table 6.12). *Monitoring pupil performance* is a practice that helps teachers use student performance data to continually evaluate the effectiveness of their teaching and make more informed instructional decisions.

Feedback (Model E-3)

In Model E-3, labelled *feedback*, all three items (Feed 3; Feed 2; and Feed1) intended to measure *feedback*, loaded onto this factor (Table 6.12). High-quality feedback is the most powerful single influence on student achievement, because students want and value quality feedback. Feedback is widely perceived as both a key benchmark of effective teaching and a vital requirement in meeting students' expectations.

High expectations (Model E-4)

Four of the five items (High 4; High 3; High 2; and High 1) used to measure the latent variable, *high expectations*, loaded onto Model E-4. One item High 5, did not load significantly and was therefore deleted (Table 6.12). Success in any meaningful

endeavour is marked by a history of high expectations that provide the challenge and inspiration necessary to push the individual to his/her highest level of performance. In schools, and with the world becoming more and more competitive, students are constantly expected to do their best because of the belief that success in school is synonymous with success in life.

After performing the exploratory factor analysis on the variable *learners*, the hypotheses were expanded to the following:

H^{1D1}: There is a positive relationship between the implementation of *autonomy* in the school environment and *learner self-esteem* in the participating secondary schools.

H^{1D2}: There is a positive relationship between the implementation of *autonomy* in the school environment and *monitoring pupil performance* in the participating secondary schools.

H^{1D3}: There is a positive relationship between the implementation of *autonomy* in the school environment and *feedback* in the participating secondary schools.

H^{1D4}: There is a positive relationship between the implementation of *autonomy* in the school environment and *high expectations* in the participating secondary schools.

H^{2D1}: There is a positive relationship between the implementation of *innovativeness* in the school environment and *learner self-esteem* in the participating secondary schools.

H^{2D2}: There is a positive relationship between the implementation of *innovativeness* in the school environment and *monitoring pupil performance* in the participating secondary schools.

- H^{2D3}: There is a positive relationship between the implementation of *innovativeness* in the school environment and *feedback* in the participating secondary schools.
- H^{2D4}: There is a positive relationship between the implementation of *innovativeness* in the school environment and *high expectations* in the participating secondary schools.
- H^{3D1}: There is a positive relationship between the implementation of *pro-activeness* in the school environment and *learner self-esteem* in the participating secondary schools.
- H^{3D2}: There is a positive relationship between the implementation of *pro-activeness* in the school environment and *monitoring pupil performance* in the participating secondary schools.
- H^{3D3}: There is a positive relationship between the implementation of *pro-activeness* in the school environment and *feedback* in the participating secondary schools.
- H^{3D4}: There is a positive relationship between the implementation of *pro-activeness* in the school environment and *high expectations* in the participating secondary schools.
- H^{4D1}: There is a positive relationship between the implementation of *competitive aggressiveness* of the school and *learner self-esteem* in the participating secondary schools.
- H^{4D2}: There is a positive relationship between the implementation of *competitive aggressiveness* of the school and *monitoring pupil performance* in the participating secondary schools.

H^{4D3}: There is a positive relationship between the implementation of *competitive aggressiveness* of the school and *feedback* in the participating secondary schools.

H^{4D4}: There is a positive relationship between the implementation of *competitive aggressiveness* of the school and *high expectations* in the participating secondary schools.

6.6 RELIABILITY OF MEASURING INSTRUMENT

The foregoing explanatory factor analysis, together with the interpretability of the factors, provides some evidence of construct validity. To assess the internal consistency of the items measuring the various factors under investigation, Cronbach's alpha coefficients were calculated (Bryman & Bell, 2007:164). Alpha coefficients measure internal consistency by computing the average of all split-half reliabilities for a multiple-item scale (Zikmund & Babin, 2007:322). The coefficient varies between 0 for no reliability, and 1 for maximum reliability (Kent, 2007:142). According to Bagozzi (1994:18), a value of 0.6 would be acceptable, although 0.7 is preferred to indicate a higher level of reliability. The results in Table 6.7, 6.8, 6.9, 6.10, and 6.11, together with the summary of the Cronbach alpha coefficients (Table 6.13), suggest that the proposed instruments, utilized to measure the dependent and independent variables, are reliable with no scores below the cut-off value of 0.7.

Table 6.13: Summary of Cronbach alpha coefficients

Entrepreneurial orientation	0.897
Innovativeness	0.897
Competitive aggressiveness	0.810
Autonomy	0.757
Pro-activeness	0.872

School leadership	
Leadership	0.936
Evaluating school performance	0.879
Staff development	0.866
Teaching and Learning	
Emphasis on academics	0.809
Class size	0.729
High quality of teaching and learning	0.860
Learner Behaviour	
Safe and orderly schools	0.801
Discipline	0.731
Parental involvement	0.884
Learners	
Learner self-esteem	0.809
Monitoring learner performance	0.847
Feedback	0.819
High expectations	0.739

6.7 THE RELATIONSHIP BETWEEN THE CONSTRUCTS

In order to assess whether the independent variables, i.e. *autonomy*, *innovativeness*, *pro-activeness*, and *competitive aggressiveness*, have an influence on the dependent variables *school leadership*, *teaching and learning*, *learner behaviour* and *learners*; a multiple regression analysis was performed. The results of the multiple regression analysis for the influence of the independent variables on the dependent variables are presented in Tables 6.14 to 6.27, respectively.

A multiple regression analysis was performed to determine the impact of entrepreneurial orientation on the dependent variable *leadership*.

Table 6.14: Multiple regression results: Impact of entrepreneurial orientation on the dependent variable *leadership*

Model	Un-standardised coefficients		Standardised coefficients	t	p-level	Collinearity statistics	
	B	Std. error	Beta			Tolerance	VIF
Constant	1.250	0.124		10.070	0.000		
Autonomy	0.242	0.034	0.220	7.046	0.000***	0.716	1.397
Innovativeness	0.358	0.040	0.368	8.974	0.000***	0.413	2.419
Pro-activeness	0.037	0.029	0.043	1.300	0.194	0.629	1.591
Competitive aggressiveness	0.130	0.033	0.163	3.937	0.000***	0.408	2.452

$R^2 = 0.446$ (* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$)

Table 6.14 indicates that, in practice, a relatively small percentage (44.6%) of the variation in the dependent variable, *leadership* in the participating schools, is explained by the four entrepreneurial orientation variables, i.e. *autonomy*, *innovativeness*, *pro-activeness* and *competitive aggressiveness*.

The multiple regression analysis indicates a significant positive relationship between the independent variables *autonomy* ($p < 0.001$), *innovativeness* ($p < 0.001$), and *competitive aggressiveness* ($p = 0.001$), and the dependent variable *leadership*. No significant relationship emerged between the independent variable *pro-activeness* ($p = 0.194$) and *leadership*.

The hypotheses that there is a significant relationship between the independent variables *autonomy* (H^{1A1}), *innovativeness* (H^{2A1}), and *competitive aggressiveness*

(H^{4A1}), and the dependent variable *leadership*, respectively, could therefore not be rejected.

The hypothesis that there is a significant relationship between the independent variable *pro-activeness* (H^{3A1}) and *leadership* was rejected.

The VIF (<5) indicates a positive correlation between the entrepreneurial constructs.

A multiple regression analysis was performed on the impact of entrepreneurial orientation on the dependent variable, *evaluating school performance*, and yielded the following results:

Table 6.15: Multiple regression results: Impact of entrepreneurial orientation on the dependent variable *evaluating school performance*

Model	Un-standardised coefficients		Standardised coefficients	t	p-level	Collinearity statistics	
	B	Std. error	Beta			Tolerance	VIF
Constant	2.188	0159		13.746	0.000		
Autonomy	0.121	0.044	0.106	2.742	0.006**	0.716	1.397
Innovativeness	0.289	0.051	0.286	5.637	0.000***	0.413	2.419
Pro-activeness	0.026	0.037	0.029	0.698	0.485	0.629	1.591
Competitive aggressiveness	0.030	0.042	0.036	0.706	0.481	0.408	2.452

$R^2 = 0.156$ (* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$)

The results of Table 6.15 indicate that 15.6% of the variation in the dependent variable, *evaluating school performance* in the participating schools, is explained by the four entrepreneurial orientation variables. The results furthermore indicate significant positive relationships between the independent variables *autonomy* ($p < 0.01$) and

innovativeness ($p < 0.001$), and the dependent variable *evaluating school performance*, respectively.

The hypotheses that there is a significant positive relationship between the independent variables *autonomy* (H^{1A2}) and *innovativeness* (H^{2A2}) and the dependent variable, *evaluating school performance* respectively, could therefore not be rejected.

The results of the multiple linear regression analyses, furthermore, showed no significant relationship between the independent variables *pro-activeness* ($p = 0.485$) and *competitive aggressiveness* ($p = 0.481$), and the dependent variable *evaluating school performance*, respectively.

The hypotheses that there is a positive relationship between the independent variables *pro-activeness* (H^{3A2}) and *competitive aggressiveness* (H^{4A2}), and *evaluating school performance*, were rejected.

The VIF (< 5) indicates a positive correlation between the entrepreneurial constructs.

The impact of entrepreneurial orientation on the dependent variable *staff development*, was determined by means of multiple regression analysis, and yielded the following results:

Table 6.16: Multiple regression results: Impact of entrepreneurial orientation on the dependent variable *staff development*

Model	Un-standardised coefficients		Standardised coefficients	t	p-level	Collinearity statistics	
	B	Std. error	Beta			Tolerance	VIF
Constant	1.802	0.117		15.456	0.000		
Autonomy	0.121	0.032	0.126	3.752	0.000***	0.716	1.397

Innovativeness	0.287	0.037	0.338	7.662	0.000***	0.413	2.419
Pro-activeness	0.032	0.027	0.042	1.184	0.237	0.629	1.591
Competitive aggressiveness	0.138	0.031	0.197	4.440	0.000***	0.408	2.452

$R^2 = 0.361$ (* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$)

The multiple linear regression analysis (Table 6.16) indicates that a significant percentage (36.1%) of the variation in the dependent variable, *staff development* in the participating schools, is explained by the four entrepreneurial orientation variables.

The results, furthermore, show significant positive relationships between the independent variables *autonomy* ($p < 0.001$), *innovativeness* ($p < 0.001$) and *competitive aggressiveness* ($p < 0.001$), and the dependent variable *staff development*.

The hypotheses that there is a significant positive relationship between the independent variables *autonomy* (H^{1A3}), *innovativeness* (H^{2A3}) and *competitive aggressiveness* (H^{4A3}), and the dependent variable, *staff development* respectively, could therefore not be rejected.

No significant relationship could be found between the independent variables *pro-activeness* ($p = 0.237$) and *staff development*. This means, in practice, that the hypothesis that there is a positive relationship between the independent variables *pro-activeness* (H^{3A3}) and *staff development* was rejected.

The VIF (< 5) indicates a positive correlation between the entrepreneurial constructs.

A multiple regression analysis was performed to determine the impact of entrepreneurial orientation on the dependent variable *emphasis on academics*, and yielded the following results:

Table 6.17: Multiple regression results: Impact of entrepreneurial orientation on the dependent variable *emphasis on academics*

Model	Un-standardised coefficients		Standardised coefficients	t	p-level	Collinearity statistics	
	B	Std. error	Beta			Tolerance	VIF
Constant	2.266	0.121		18.691	0.000		
Autonomy	0.085	0.034	0.089	2.523	0.012*	0.716	1.397
Innovation	0.301	0.039	0.360	7.728	0.000***	0.413	2.419
Pro-activeness	0.050	0.028	0.067	1.784	0.075	0.629	1.591
Competitive aggressiveness	0.073	0.032	0.106	2.253	0.025*	0.408	2.452

$R^2 = 0.288$ (* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$)

Table 6.17 shows that 28.8% of the variation in the dependent variable, in the participating schools, is explained by the four entrepreneurial orientation variables. The multiple regression analysis indicates significant positive relationships between the independent variables *autonomy* ($p < 0.05$), *innovativeness* ($p < 0.001$) and *competitive aggressiveness* ($p < 0.05$), and the dependent variable *emphasis on academics* respectively.

No significant relationship could be found between the independent variable *pro-activeness* ($p = 0.075$) and the dependent variable *emphasis on academics*.

The hypotheses that there is a significant positive relationship between the independent variables *autonomy* (H^{1B1}), *innovativeness* (H^{2B1}) and *competitive aggressiveness* (H^{4B1}), and the dependent variable, *emphasis on academics*, respectively, could therefore not be rejected.

The hypothesis that there is a positive relationship between the independent variables *pro-activeness* (H^{3B1}) and *emphasis on academics* was rejected.

The VIF (<5) indicates a positive correlation between the entrepreneurial constructs.

The impact of entrepreneurial orientation on the dependent variable *class size* was determined by means of a multiple regression analysis, and yielded the following results:

Table 6.18: Multiple regression results: Impact of entrepreneurial orientation on the dependent variable, *class size*

Model	Un-standardised coefficients		Standardised coefficients	t	p-level	Collinearity statistics	
	B	Std. error	Beta			Tolerance	VIF
Constant	4.283	0.136		31.433	0.000		
Autonomy	0.019	0.038	0.021	0.499	0.618	0.716	1.397
Innovativeness	0.072	0.044	0.090	1.641	0.101	0.413	2.419
Pro-activeness	0.098	0.031	0.139	3.142	0.002**	0.629	1.591
Competitive aggressiveness	0.089	0.036	-0.134	-2.444	0.015*	0.408	2.452

$R^2 = 0.021$ (* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$)

Table 6.18 indicates that, in practice, a very small percentage (2.1%) of the variation in the dependent variable, *class size* in the participating schools, is explained by the four entrepreneurial orientation variables, i.e. *autonomy*, *innovativeness*, *pro-activeness* and *competitive aggressiveness*.

The multiple regression analysis indicates significant positive relationships between the independent variables *pro-activeness* ($p < 0.01$) and *competitive aggressiveness* ($p < 0.05$), and the dependent variable *class size*, respectively.

No significant relationship emerged between the independent variable *autonomy* ($p=0.618$) and *innovativeness* ($p=0.101$), and the dependent variable *class size*.

The hypotheses that there is a significant relationship between the independent variables *pro-activeness* (H^{3B2}), *competitive aggressiveness* (H^{4B2}) and the dependent variable, *class size* respectively, could therefore not be rejected. The hypotheses that there is a significant relationship between the independent variables *autonomy* (H^{1B2}) and *innovativeness* (H^{2B2}), and *class size* were rejected.

The VIF (<5) indicates a positive correlation between the entrepreneurial constructs.

A multiple regression analysis was performed to determine the impact of entrepreneurial orientation on the dependent variables *quality of teaching and learning*, and yielded the following results:

Table 6.19: Multiple regression results: Impact of entrepreneurial orientation on the dependent variable *quality of teaching and learning*

Model	Un-standardised coefficients		Standardised coefficients	t	p-level	Collinearity statistics	
	B	Std. error	Beta			Tolerance	VIF
Constant	1.946	0.135		14.447	0.000		
Autonomy	.0166	0.037	0.159	4.462	0.000***	0.716	1.397
Innovativeness	0.286	0.043	0.310	6.606	0.000***	0.413	2.419
Pro-activeness	0.053	0.031	0.065	1.714	0.087	0.629	1.591
Competitive aggressiveness	0.069	0.036	0.090	1.910	0.056	0.408	2.452

$R^2 = 0.274$ (* $p<0.05$; ** $p<0.01$; *** $p<0.001$)

The results of Table 6.19 indicate that 27.4% of the variation in the dependent variable, *quality of teaching and learning* in the participating schools, is explained by the four

entrepreneurial orientation variables. The results furthermore indicate significant positive relationships between the independent variables *autonomy* ($p < 0.001$) and *innovativeness* ($p < 0.001$), and the dependent variable *quality of teaching and learning*, respectively.

The hypotheses that there is a respective significant positive relationship between the independent variables *autonomy* (H^{1B3}) and *innovativeness* (H^{2B3}) and the dependent variable *quality of teaching and learning* could therefore not be rejected.

The results of the multiple linear regression analyses, furthermore, showed no significant relationships between the independent variables *pro-activeness* ($p = 0.087$), and *competitive aggressiveness* ($p = 0.056$) and the dependent variable *quality of teaching and learning* respectively.

The hypotheses that there is a positive relationship between the independent variables *pro-activeness* (H^{3B3}) and *competitive aggressiveness* (H^{4B3}) and *quality of teaching and learning*, were rejected.

The VIF (< 5) indicates a positive correlation between the entrepreneurial constructs.

The impact of entrepreneurial orientation on the dependent variable *safe and orderly schools*, was determined by means of a multiple regression analysis, and yielded the following results:

Table 6.20: Multiple regression results: Impact of entrepreneurial orientation, on the dependent variable *safe and orderly schools*

Model	Un-standardised coefficients		Standardised coefficients	t	p-level	Collinearity statistics	
	B	Std. error	Beta			Tolerance	VIF
Constant	2.320	0.117		19.866	0.000		

Autonomy	0.130	0.032	0.143	4.031	0.000***	0.716	1.397
Innovativeness	0.241	0.038	0.299	6.417	0.000***	0.413	2.419
Pro-activeness	0.026	0.027	0.037	0.983	0.326	0.629	1.591
Competitive Aggressiveness	0.104	0.031	0.156	3.327	0.001**	0.408	2.452

$R^2 = 0.288$ (* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$)

The multiple linear regression analysis (Table 6.20) indicates that a smaller percentage (28.1%) of the variation in the dependent variable, *safe and orderly schools* in the participating schools, is explained by the four entrepreneurial orientation variables. The results, furthermore, show significant positive relationships between the independent variables *autonomy* ($p < 0.001$), *innovativeness* ($p < 0.001$) and *competitive aggressiveness* ($p < 0.01$), and the dependent variable *safe and orderly schools*.

The hypotheses that there is a significant positive relationship between the independent variables *autonomy* (H^{1C1}), *innovativeness* (H^{2C1}) and *competitive aggressiveness* (H^{4C1}), and the dependent variable, *safe and orderly schools* respectively, could therefore not be rejected.

No significant relationship could be found between the independent variables *pro-activeness* ($p = 0.326$) and *safe and orderly schools*. This means, in practice, that the hypothesis that there is a positive relationship between the independent variable *pro-activeness* (H^{3C1}) and *safe and orderly schools* was rejected.

The VIF (< 5) indicates a positive correlation between the entrepreneurial constructs.

A multiple regression analysis was performed to determine the impact of entrepreneurial orientation on the dependent variable *discipline*, and yielded the following results:

Table 6.21: Multiple regression results: Impact of entrepreneurial orientation on the dependent variable *discipline*

Model	Un-standardised coefficients		Standardised coefficients	t	p-level	Collinearity statistics	
	B	Std. error	Beta			Tolerance	VIF
Constant	3.414	0.107		31.966	0.000		
Autonomy	0.077	0.030	0.102	2.614	0.009**	0.716	1.397
Innovativeness	0.138	0.034	0.207	4.019	0.000***	0.413	2.419
Pro-activeness	0.056	0.025	0.096	2.285	0.023*	0.629	1.591
Competitive Aggressiveness	0.013	0.028	0.024	0.470	0.638	0.408	2.452

$R^2 = 0.125$ (* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$)

Table 6.21 shows that only 12.5% of the variation in the dependent variable, in the participating schools, is explained by the four entrepreneurial orientation variables. The multiple regression analysis indicates significant positive relationships between the independent variables *autonomy* ($p < 0.01$), *innovativeness* ($p < 0.001$) and *pro-activeness* ($p < 0.05$), and the dependent variable *discipline*.

No significant relationship could be found between the independent variables *competitive aggressiveness* ($p = 0.638$) and the dependent variable *discipline*.

The hypotheses that there is a significant positive relationship between the independent variables *autonomy* (H^{1C2}), *innovativeness* (H^{2C2}) and *pro-activeness* (H^{3C2}), and the dependent variable, *discipline* respectively, could therefore not be rejected. The hypothesis that there is a positive relationship between the independent variables *competitive aggressiveness* (H^{4C2}) and *discipline* was rejected.

The VIF (< 5) indicates a positive correlation between the entrepreneurial constructs.

The impact of entrepreneurial orientation on the dependent variable *parental involvement* was determined by means of multiple regression analysis and yielded the following results:

Table 6.22: Multiple regression results: Impact of entrepreneurial orientation on the dependent variable *parental involvement*

Model	Un-standardised coefficients		Standardised coefficients	t	p-level	Collinearity statistics	
	B	Std. error	Beta			Tolerance	VIF
Constant	1.406	0.152		9.222	0.000		
Autonomy	0.082	0.042	0.069	1.948	0.052	0.716	1.397
Innovativeness	0.206	0.049	0.195	4.200	0.000***	0.413	2.419
Pro-activeness	0.163	0.035	0.176	4.655	0.000***	0.629	1.591
Competitive Aggressiveness	0.180	0.041	0.208	4.434	0.000***	0.408	2.452

$R^2 = 0.289$ (* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$)

Table 6.22 indicates that, in practice, 28.9% of the variation in the dependent variable, *parental involvement* in the participating schools, is explained by the four entrepreneurial orientation variables, *autonomy*, *innovativeness*, *pro-activeness* and *competitive aggressiveness*.

The multiple regression analysis indicates significant positive relationships between the independent variables *innovativeness* ($p < 0.001$), *pro-activeness* ($p < 0.001$) and *competitive aggressiveness* ($p < 0.001$), and the dependent variable *parental involvement* respectively

No significant relationship emerged between the independent variables *autonomy* ($p = 0.052$) and the dependent variable *parental involvement*.

The hypotheses that there is a significant relationship between the independent variables *innovativeness* (H^{2C3}), *pro-activeness* (H^{3C3}) and *competitive aggressiveness* (H^{4C3}), and the dependent variable, *parental involvement* respectively, could therefore not be rejected.

The hypothesis that there is a significant relationship between the independent variables *autonomy* (H^{1C3}) and *parental involvement* was rejected.

The VIF (<5) indicates a positive correlation between the entrepreneurial constructs.

A multiple regression analysis was performed to determine the impact of entrepreneurial orientation on the dependent variable *learner self-esteem*, and yielded the following results.

Table 6.23: Multiple regression results: Impact of entrepreneurial orientation on the dependent variable *learner self-esteem*

Model	Un-standardised coefficients		Standardised coefficients	t	p-level	Collinearity statistics	
	B	Std. error	Beta			Tolerance	VIF
Constant	3.113	0.116		26.926	0.000		
Autonomy	0.079	0.032	0.096	2.486	0.013*	0.716	1.397
Innovativeness	0.175	0.037	0.240	4.711	0.000***	0.413	2.419
Pro-activeness	0.106	0.027	0.165	4.003	0.000***	0.629	1.591
Competitive aggressiveness	-0.024	0.031	-0.041	-0.790	0.430	0.408	2.452

$R^2 = 0.147$ (* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$)

The results of Table 6.23 indicate that only 14.7% of the variation in the dependent variable, *learner self-esteem* in the participating schools, is explained by the four entrepreneurial orientation variables.

The results furthermore indicate significant positive relationships between the independent variables *autonomy* ($p < 0.05$), *innovativeness* ($p < 0.001$) and *pro-activeness* ($p < 0.001$), and the dependent variable *learner self-esteem*, respectively.

The hypotheses that there are significant respective positive relationships between the independent variables *autonomy* (H^{1D1}), *innovativeness* (H^{2D1}) and *pro-activeness* (H^{3D1}), and the dependent variable *learner self-esteem* respectively, could therefore not be rejected.

The results of the multiple linear regression analyses, furthermore, showed no significant relationship between the independent variables *competitive aggressiveness* ($p = 0.430$) and the dependent variable *learner self-esteem*.

The hypothesis that there is a positive relationship between the independent variables *competitive aggressiveness* (H^{4D1}) and *learner self-esteem* was rejected.

The VIF (< 5) indicates a positive correlation between the entrepreneurial constructs.

The impact of entrepreneurial orientation on the dependent variable *monitoring pupil performance* was determined by means of multiple regression analysis and yielded the following results:

Table 6.24: Multiple regression results: Impact of entrepreneurial orientation on the dependent variable *monitoring pupil performance*

Model	Un-standardised coefficients		Standardised coefficients	t	p-level	Collinearity statistics	
	B	Std. error	Beta			Tolerance	VIF
Constant	2.930	0.116		25.236	0.000		
Autonomy	0.094	0.032	0.112	2.918	0.004**	0.716	1.397
Innovativeness	0.236	0.037	0.319	6.323	0.000***	0.413	2.419

Pro-activeness	0.045	0.027	0.069	1.680	0.093	0.629	1.591
Competitive aggressiveness	-0.22	0.031	-0.036	-0.705	0.481	0.408	2.452

$R^2 = 0.163$ (* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$)

Table 6.24 indicates that, in practice, a relatively small percentage (16.3%) of the variation in the dependent variable, *monitoring pupil performance* in the participating schools, is explained by the four entrepreneurial orientation variables, *autonomy*, *innovativeness*, *pro-activeness* and *competitive aggressiveness*.

The multiple regression analysis indicates significant positive relationships between the independent variables *autonomy* ($p < 0.01$) and *innovativeness* ($p < 0.001$), and the dependent variable *monitoring pupil performance*, respectively. No significant relationship emerged between the independent variables *pro-activeness* ($p = 0.093$) *competitive aggressiveness* ($p = 0.481$) and the dependent variable *monitoring pupil performance*.

The hypotheses that there is a significant relationship between the independent variables *autonomy* (H^{1D2}) and *innovativeness* (H^{2D2}), and the dependent variable, *monitoring pupil performance*, respectively, could therefore not be rejected. The hypotheses that there is a significant relationship between the independent variables *pro-activeness* (H^{3D2}) and *competitive aggressiveness* (H^{4D2}), and the dependent variable *monitoring pupil performance*, were rejected.

The VIF (< 5) indicates a positive correlation between the entrepreneurial constructs.

The impact of entrepreneurial orientation on the dependent variable *feedback*, was determined by means of a multiple regression analysis, and yielded the following results:

Table 6.25: Multiple regression results: Impact of entrepreneurial orientation on the dependent variable *feedback*

Model	Un-standardised coefficients		Standardised coefficients	T	p-level	Collinearity statistics	
	B	Std. error	Beta			Tolerance	VIF
Constant	3.561	0.119		29.826	0.000		
Autonomy	0.073	0.033	0.090	2.217	0.027*	0.716	1.397
Innovativeness	0.181	0.038	0.251	4.724	0.000***	0.413	2.419
Pro-activeness	-0.003	0.027	-0.004	-0.094	0.925	0.629	1.591
Competitive aggressiveness	-0.034	0.032	-0.057	-1.063	0.288	0.408	2.452

$R^2 = 0.072$ (* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$)

The results of Table 6.25 indicate that only 7.2% of the variation in the dependent variable, *feedback* in the participating schools, is explained by the four entrepreneurial orientation variables.

The results furthermore indicate respective significant positive relationships between the independent variables *autonomy* ($p < 0.05$) and *innovativeness* ($p < 0.001$), and the dependent variable *feedback*.

The hypotheses that there is a significant positive relationship between the independent variables *autonomy* (H^{1D3}) and *innovativeness* (H^{2D3}), and the dependent variable, *feedback*, respectively, could therefore not be rejected.

The results of the multiple linear regression analyses, furthermore showed no significant relationship between the independent variables *pro-activeness* ($p = 0.925$) and *competitive aggressiveness* ($p = 0.288$), and the dependent variable *feedback*.

The hypotheses that there is a positive relationship between the independent variables *pro-activeness* (H^{3D3}) and *competitive aggressiveness* (H^{4D3}), and *feedback*, were rejected.

The VIF (<5) suggests a positive correlation between the entrepreneurial constructs.

The impact of entrepreneurial orientation on the dependent variable *high expectations*, was determined by means of a multiple regression analysis, and yielded the following results:

Table 6.26: Multiple regression results: Impact of entrepreneurial orientation on the dependent variable *high expectations*

Model	Un-standardised coefficients		Standardised coefficients	t	p-level	Collinearity statistics	
	B	Std. error	Beta			Tolerance	VIF
Constant	3.307	0.118		28.109	0.000		
Autonomy	0.069	0.033	0.084	2.114	0.035*	0.716	1.397
Innovativeness	0.168	0.038	0.232	4.437	0.000***	0.413	2.419
Pro-activeness	-0.015	0.027	-0.024	-0.565	0.572	0.629	1.591
Competitive aggressiveness	0.032	0.031	0.053	1.014	0.311	0.408	2.452

$R^2 = 0.098$ (* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$)

The multiple linear regression analysis (Table 6.26) indicates that a small percentage (9.8%) of the variation in the dependent variable, *high expectations*, in the participating schools, is explained by the four entrepreneurial orientation variables.

The results furthermore show significant positive relationships between the independent variables *autonomy* ($p < 0.05$) and *innovativeness* ($p < 0.001$), and the dependent variable *high expectations*.

The hypotheses that there is a significant positive relationship between the independent variables *autonomy* (H^{1D4}) and *innovativeness* (H^{2D4}), and the dependent variable, *high expectations* respectively, could therefore not be rejected.

No significant relationship could be found between the independent variables *pro-activeness* ($p=0.572$) and *competitive aggressiveness* ($p=0.311$), respectively. This means, in practice, that the hypotheses that there is a positive relationship between the independent variables *pro-activeness* (H^{3D4}) and *competitive aggressiveness* (H^{4D4}), and *high expectations*, were rejected.

The VIF (<5) indicates a positive correlation between the entrepreneurial constructs.

6.8 VARIANCE ANALYSIS

In order to analyse the variance in the outcome variables when the predictor variables are at varying hierarchical levels, a ***Hierarchical Linear Modelling (HLM)*** was performed.

Results are discussed in Chapter 7.

The results of the HLM, depicting the variance analysis of *autonomy*, *innovativeness*, *pro-activeness* and *competitive aggressiveness* are presented in Table 6.27.

Table 6.27: Hierarchical Linear Modelling results: Variance analysis of autonomy, innovativeness, pro-activeness and competitive aggressiveness factors.

Entrepreneurial Orientation: Autonomy						
School groups	Estimate	Estimates of covariance parameters		Significance	Effect size	
	Mean	Residual	Intercept	<i>p</i> -value*	A with...	B with...
Group A	3.960	0.3761	0.0178	0.034		
Group B	3.747				0.34	

Group C	3.725				0.38	0.04
Entrepreneurial Orientation: Innovativeness						
Group A	3.910	0.4290	0.0589	0.023		
Group B	3.621				0.41	
Group C	3.444				0.67	0.25
Entrepreneurial Orientation: Pro-activeness						
Group A	3.696	0.5448	0.1093	0.140		
Group B	3.461				0.29	
Group C	3.264				0.53	0.24
Entrepreneurial Orientation: Competitive Aggressiveness						
Group A	3.801	0.6307	0.0987	0.036		
Group B	3.389				0.48	
Group C	3.308				0.58	0.09

* The p-values are reported for the sake of completeness, but will not be interpreted since a convenience sample instead of a random sample was used.

6.8.1 Difference between Groups A, B and C in terms of *autonomy*

The analysis shows practically non-significant differences in the estimated means of the three groups in terms of the three sub-factors assessing autonomy (effect sizes=0.04–0.38).

6.8.2 Difference between Groups A, B and C in terms of *innovativeness*

The difference in the estimated means of groups A and C is medium to large (effect size=0.67). Group A agrees with the statements of the innovativeness factor (mean=3.696), and Group C leans somewhat more towards the neutral option (mean=3.444). The other differences are small and small to medium (effect size=0.25 and 0.41).

6.8.3 Differences between Groups A, B and C in terms of *pro-activeness*

The difference in the estimated means of groups A and C is medium (effect size=0.53). Group A agrees with the statements of the innovativeness factor (mean=3.910) and Group C leans somewhat more toward the neutral option (mean=3.264). The other differences are small (effect size=0.29 and 0.24), which indicated a practically non-significant difference.

6.8.4 Difference between Groups A, B and C in terms of *competitive aggressiveness*

The differences in the estimated means of groups A and B as well as A and C are medium (effect size=0.58 and 0.48), which indicate practically visible differences. Group A agrees with the statements of the competitive aggressiveness factor (mean=3.801). Groups B and C lean somewhat more towards the neutral option (mean=3.389 and 3.308). The other difference is small (effect size=0.09), which indicates a practically non-significant difference. The results of the HLM depicting the variance analysis of *leadership, evaluating school performance and staff development*, are presented in Table 6.28.

Table 6.28: Hierarchical Linear Modelling results: Variance analysis of leadership, evaluating school performance and staff development factors.

School Leadership						
Leadership						
School groups	Estimate	Estimates of covariance parameters		Significance	Effect size	
	Mean	Residual	Intercept	p-value*	A with...	B with...
Group A	4.177	0.4471	0.0376	0.409		
Group B	4.030				0.21	
Group C	4.051				0.18	0.03

Evaluating school performance						
Group A	3.873	0.5169	0.0080	0.457		
Group B	3.919				0.06	
Group C	3.994				0.17	0.10
Staff development						
Group A	3.941	0.3508	0.0237	0.534		
Group B	3.885				0.09	
Group C	4.001				0.10	0.19

* The p-values are reported for the sake of completeness, but will not be interpreted since a convenience sample, instead of a random sample, was used.

6.8.5 Differences between Groups A, B and C in terms of *leadership, evaluating school performance and staff development*

The analysis shows practically non-significant differences in the estimated means of the three groups in terms of all three sub-factors assessing school leadership, namely leadership, school performance and staff development (effect sizes ≤ 0.21).

The results of the HLM depicting the variance analysis of *emphasis on academics, class size and high quality of teaching and learning*, are presented in Table 6.29.

Table 6.29: Hierarchical Linear Modelling results: Variance analysis of the emphasis on academics, class size and high quality of teaching and learning factors.

Teaching and Learning						
Emphasis on academics						
School groups	Estimate	Estimates of covariance parameters		Significance	Effect size	
	Mean	Residual	Intercept	p-value*	A with..	B with..
Group A	4.294	0.3289	0.0186	0.015		
Group B	4.030				0.45	

Group C	4.109				0.31	0.13
Class size						
Group A	4.625	0.3289	0.0010	0.205		
Group B	4.693				0.12	
Group C	4.595				0.05	0.17
High quality of teaching and learning						
Group A	4.127	0.4244	0.0106	0.249		
Group B	4.011				0.18	
Group C	4.112				0.02	0.15

* The p-values are reported for the sake of completeness, but will not be interpreted since a convenience sample; instead of a random sample was used.

6.8.6 Differences between Groups A, B and C in terms of *emphasis on academics*

The difference in the estimated means of Group A, in relation to Group B, leans towards a medium effect (effect size=0.45), which indicates a tendency towards a practically visible difference. Group A leans more towards strongly agree, - with the statements of emphasis on academics, than Group B, which is closer to agreeing with the statements. The remaining effect size shows practically non-significant differences (effect sizes $\leq$ 0.31).

6.8.7 Differences between Groups A, B and C in terms of *class size and high quality of teaching and learning*

The analysis shows practically non-significant differences in the estimated means of the three groups in terms of the two sub-factors assessing teaching and learning, namely class size and quality of teaching and learning (effect sizes $\leq$ 0.18).

The results of the HLM depicting the variance analysis of *safe and orderly schools, discipline* and *parental involvement*, are presented in Table 6.30.

Table 6.30: Hierarchical Linear Modelling results: Variance analysis of the safe and orderly schools, discipline and parental involvement factors.

Learner behaviour						
Safe and orderly schools						
School groups	Estimate	Estimates of covariance parameters		Significance	Effect size	
	Mean	Residual	Intercept	p-value*	A with...	B with...
Group A	4.290	0.3109	0.0191	0.074		
Group B	4.092				0.35	
Group C	4.131				0.28	0.07
Discipline						
Group A	4.546	0.2200	0.0052	0.041		
Group B	4.439				0.22	
Group C	4.373				0.36	0.14
Parental involvement						
Group A	3.926	0.4811	0.0612	0.017		
Group B	3.507				0.57	
Group C	3.777				0.20	0.37

*The *p*-values are reported for the sake of completeness, but will not be interpreted since a convenience sample; instead a random sample was used.

6.8.8 Differences between Groups A, B and C in terms of *safe and orderly schools and discipline*

The analysis shows practically non-significant differences in the estimated means of the three groups in terms of two sub-factors assessing learner behaviour, namely safe and orderly schools and discipline (effect sizes ≤ 0.36).

6.8.9 Differences between Groups A, B and C in terms of *parental involvement*

The difference in the estimated means of Groups A and B is practically visible (effect size=0.57). In general, Group A agrees (mean=3.926) with the statements of the parental involvement factors, whereas the respondents of Group B lean a bit more over to the neutral option (mean=3.507). The remaining effect sizes show practically non-significant differences (0.20 and 0.37).

The results of the HLM, depicting the variance analysis of *learner self-esteem*, *monitoring learner performance*, *feedback* and *high expectations*, are presented in Table 6.31.

Table 6.31: Hierarchical Linear Modelling results: Variance analysis of the learner self-esteem, monitoring learner performance, feedback and high expectations factors.

Learners						
Learner self-esteem						
School groups	Estimate	Estimates of covariance parameters		Significance	Effect size	
	Mean	Residual	Intercept	p-value*	A with..	B with..
Group A	4.386	0.2642	0.0107	0.078		
Group B	4.342				0.08	
Group C	4.304				0.16	0.07
Monitoring learner performance						
Group A	4.289	0.2727	0.0071	0.085		
Group B	4.252				0.07	
Group C	4.112				0.34	0.26
Feedback						
Group A	4.369	0.2678	0.0004	0.580		
Group B	4.384				0.03	
Group C	4.429				0.12	0.09

High expectations						
Group A	4.283	0.2633	0.0048	0.516		
Group B	4.224				0.11	
Group C	4.271				0.02	0.09

* The p-values are reported for the sake of completeness, but will not be interpreted since a convenience sample; instead a random sample was used.

6.8.10 Differences between Groups A, B and C in terms of *learner self-esteem, monitoring learner performance, feedback and high expectations*

The analysis shows practically non-significant differences in the estimated means of the three groups in terms of all three sub-factors assessing learners, namely learner self-esteem, monitoring learner performance, feedback and high expectations (effect sizes ≤ 0.34).

6.9 DETERMINING OF THE CORRELATIONS BETWEEN THE INDEPENDENT VARIABLES AND THE FOUR BROAD FACTORS OF DEPENDENT VARIABLES USING SPEARMAN'S RHO.

As indicated in Table 6.1, the 13 possible indicators of perceived school success were grouped together in four main categories. To determine the correlation between the independent variables and the four main categories or broad factors of perceived school success, Spearman's rho was calculated.

6.9.1 Reliability

The internal reliability of the four broad factors was tested through Cronbach's alpha. As previously indicated, reliability tests as to whether the instrument produces consistent results if the test is repeated, were necessary. This could be verified via Cronbach's alpha. (Bryman & Bell, 2015:169). A summary of the results of Cronbach's alpha is depicted in Table 6.32.

Table 6.32: Results of Cronbach's alpha coefficients of the four broad factors

Dependent variable	Cronbach's alpha coefficient
School leadership	0.787
Teaching and learning	0.742*
Learner behaviour	0.720
Learners	0.800

*Class size was omitted from the *teaching and learning* factor due to the low corrected item-total correlation.

Bryman and Bell (2015:169) explain that Cronbach's alpha is a commonly used test of internal reliability. It essentially calculates the average of all split-half reliability coefficients. Computed alpha coefficients will vary between 1 (denoting perfectly internal reliability) and 0 (denoting no internal reliability). According to Bagozzi (1994:18), a value of 0.6 would be acceptable, although 0.7 is preferred to indicate a higher level of reliability. In essence 0.8 is typically employed as a rule of thumb to denote an acceptable level of internal reliability, though many writers accept a slightly lower figure.

It is clear from the results presented in Table 6.31 that the measuring instrument, regarding the four broad factors of dependent variables, is reliable.

6.9.2 Correlation between the independent variables and the dependent variables.

Spearman's rho measures the strength of association between two variables. Spearman's correlation coefficient varies from -1 to +1 and the absolute values also describe the strength of the monotonic relationship. The parameters for a significant correlation are:

- 0.1 = No practically significant correlation.
- 0.3 = A practically visible correlation.
- 0.5 = A practically significant correlation (Ellis & Steyn, 2003:53).

A summary of the correlation between the independent variables and the four broad factors of dependent variables is presented in Table 6.33.

Table 6.33: Results: Spearman's rho; correlations between the four broad factors of dependent variables and the independent variables.

Independent variable	Dependent variables grouped together			
	School leadership	Teaching and learning	Learner behaviour	Learners
Autonomy	0.498	0.420	0.394	0.331
Results	Practically visible correlation	Practically visible correlation	Practically visible correlation	Practically visible correlation
Innovativeness	0.649	0.584	0.558	0.423
Results	Practically significant correlation	Practically significant correlation	Practically significant correlation	Practically visible correlation
Pro-activeness	0.453	0.417	0.443	0.281
Results	Practically visible correlation	Practically visible correlation	Practically visible correlation	No practically significant correlation
Competitive aggressiveness	0.582	0.500	0.518	0.319
Results	Practically significant correlation	Practically significant correlation	Practically significant correlation	Practically visible correlation

6.9.3 Discussion of results

The results, as depicted in Table 6.32 of Spearman's rho, indicate that the four groups of dependent variables are reliable, after determining the Cronbach alpha coefficients. Practical significant correlations were found between **innovativeness**, *school leadership*, *teaching and learning* on the one hand and *learner behaviour*, **competitive aggressiveness**, *school leadership*, *teaching and learning* and *learner behaviour* on the other hand. Practical visible correlations were found between **autonomy**; *school*

leadership; teaching and learning; learner behaviour and learners; innovativeness on one side and *learners; pro-activeness; school leadership; teaching and learning and learner behaviour*; and **competitive aggressiveness** and *learners, on the other*.

6.10 SUMMARY

The empirical study, developed in line with the literature study, focused on public secondary schools. The purpose of this study is to assess the level and impact of entrepreneurial orientation on the perceived success of three selected groups of public secondary schools in Gauteng. The empirical study strived to gain insight into the effect of independent variables on *perceived school success*. Through the empirical research, the correlations between independent and dependent variables were drawn after a factor analysis determined the reliability and validity of the measurement instrument. The study was based on a sample of 800 educators who were all respondents to a quantitative survey.

The dependent variables were identified as the dimensions of entrepreneurial orientation, namely autonomy, innovativeness, pro-activeness, risk-taking and competitive aggressiveness. The literature study enabled the researcher to identify 13 independent variables, measuring perceived school success. The independent variables were divided into four broad factors. After grouping, the four broad factors were **school leadership** (*leadership, evaluating school performance and staff development*), **teaching and learning** (*emphasis on academics, class size and high quality of teaching and learning*), **learner behaviour** (*safe and orderly schools, discipline and parental involvement*), and **learners** (*learner self-esteem, monitoring pupil performance, feedback and high expectations*). No factor loaded significantly onto the independent variable, **risk-taking**, which was therefore removed.

In order to assess whether the independent variables, *autonomy, innovativeness, pro-activeness, and competitive aggressiveness*, have an influence on the 13 dependent variables, multiple regression analyses were performed. The schools selected for the

study are all regarded as successful, based on the results of their 2014 - 2015 Grade 12 results. The schools were grouped into three distinct groups and range from well-resourced schools in privileged suburbs to schools in townships and poor peri-urban areas in Gauteng. A Hierarchical Linear Modelling was performed to determine whether there are significant differences between the school groups in terms of selected variables, and to determine the correlation between the independent variables and the four broad factors of perceived school success. A Spearman's rho was also performed to determine the correlation between the independent variables and the four broad factors of the dependent variables.

Several hypotheses were formulated to describe the relationship between the independent variables and the four broad factors of dependent variables. A theoretical model was developed to depict the possible relationships. Risk-taking was removed, the theoretical model was modified and the hypotheses were adjusted. After multiple regression analyses the hypotheses were extended to include 13 original dependent variables, to determine the relationships between the independent and dependent variables.

All criteria were met to ensure that the research was conducted according to research principles. The hope is that, through the research, education authorities and school principals in South Africa will gain some insight into the creation of entrepreneurial success as a mean to school success and competitive advantage. They should also consider the measurements of *perceived school success* in order to more accurately predict outcomes.

The findings and recommendations of the study are described in Chapter 7.

CHAPTER 7

CONCLUSIONS AND RECOMMENDATIONS

7.1 INTRODUCTION

This chapter discusses the implications of the findings of the empirical study as presented in Chapter 6. This is the final chapter in the assessment of entrepreneurial orientation in selected public secondary schools.

The chapter consists of two sections. In the first part, deductions and conclusions are drawn from the results of the literature study and the findings of the empirical study. The discussion focuses on the findings regarding entrepreneurial orientation in selected public secondary schools, taking cognisance of the primary and secondary objectives, as specified in Chapter one. Conclusions are drawn with regard to the empirical research performed, and the statistical results discussed in Chapter 6. The relationship between the constructs, entrepreneurial orientation and perceived success factors of public secondary schools, are also discussed. Furthermore, the relevance of the relationships between demographic factors and the constructs, measuring entrepreneurial orientation and perceived success factors of public secondary schools, are illustrated.

The rapidly changing education environment, coupled with the current state of the South African Education System, require principals, school management teams and teachers to behave more entrepreneurially. This necessitates a discussion on how to possibly increase entrepreneurial orientation within secondary schools, and encapsulates the second section of this chapter. The achievement of the primary and secondary objectives is considered.

In the conclusion of the chapter, suggestions are made for future research.

7.2 CONCLUSIONS

In this section, conclusions are drawn, based on the literature review and the findings of the quantitative and qualitative research.

7.2.1 Demographical information

Demographical information was collected from respondents regarding their age, gender, race, post level at the school, and their highest academic qualification. From the results of the questionnaire, the following conclusions could be made regarding the demographical information of respondents:

- The majority of respondents (30.8%) were between 50 and 59 years of age. Only 6.5% of the respondents were 60 years and older and nearing retirement age. A total of 24.8% of the respondents were 40 to 49 years of age, with 20.9% between 30 and 39 years of age. Only 17% were younger than 29 years of age.

The Centre for Development and Enterprise (2015:6) warns that enrolments in South African schools are expected to rise from some 12.4 million in 2013 to 13.4 million in 2023, after which they will decrease to 13.3 million in 2025. Nationally, the age of educators' distribution is not the typical bell curve: it is bimodal, with most teachers aged 40 to 49 years. This will create a significant problem by 2025 when this group will be 50 to 59 years old, with many in the process of retiring. The smallest number of teachers will then be 40 to 49 years old. Since this is typically the group from which senior managers and principals are drawn, teachers with less experience will have to be promoted to fill these positions.

- The majority of respondents (74%) were female, while 26% were male, proving that there are more female educators in public secondary schools.

- The majority of respondents (83.5%) were White. The Black respondents totalled 15.4%, Indians 0.6% and the Coloured respondents 0.5%.
- The majority of respondents (79.3%) were educators on post level 1 and 15.4% were heads of departments. Deputy principals on post level 3, represented 3.8% of the respondents, and principals 1.6%.
- The majority of respondents (31.9%) had a degree as well as a diploma/certificate, followed by 21.9% who had a diploma. A total of 20.5% had a degree, 18% had honours degrees, and 2.4% only had Grade 12. All in all, 2.8% of the respondents were in possession of a master's degree and 0.8% had a PhD.

7.2.2 Reliability of the questionnaire

To assess the internal consistency of the items measuring the various factors under investigation, Cronbach's alpha coefficients were calculated (Bryman & Bell, 2007:164). Coefficient alpha measures internal consistency by computing the average of all split-half reliabilities for a multiple-item scale (Zikmund & Babin, 2007:322). All the constructs measuring the dependent and independent variables produced Cronbach alpha coefficients, with values greater than 0.7. This reveals that the measuring instrument used to assess the entrepreneurial orientation and perceived success in selected secondary schools, produced a reliable result.

7.2.3 Validity of the questionnaire

An exploratory factor analysis was conducted to identify the unique factors present in the data before conducting a multiple regression analysis to assess the relationships between the variables. The number of factors and the items loading onto each factor must be known.

The exploratory analysis indicated that the independent variables loaded onto four broad factors, namely *innovativeness*, *autonomy*, *pro-activeness* and *competitive aggressiveness*. No variables loaded on *risk taking*, the fifth construct of entrepreneurial orientation.

Factor 1, labelled *innovativeness*, comprised of eight items. Eight of the nine items (Inno 2; Inno 4; Inno 3; Inno 1; Inno 5; Inno 6; Inno 8; and Inno 9) used to measure the latent variable *innovativeness* (refer to Table 6.2), loaded significantly onto Factor 1. One item, Inno 7, was deleted, as there was no positive correlation.

Pihie *et al.* (2014:2) describe innovativeness as the ability and tendency of entrepreneurial leaders to think creatively and develop novel and practical ideas relating to opportunity recognition, resource utilisation and problem solving (Chen, 2007; Gupta *et al.*, 2004). Hamzah *et al.* (2009) explain that school principals' need to acquire and practice entrepreneurial leadership characteristics in order to improve their school effectiveness and to facilitate the process of school innovation.

Organisational innovativeness reflects the capacity of a school to develop and implement novel ideas that lead to critical changes and improvements at the school (Eyal & Kark, 2004; Eyal & Inbar, 2003). According to Eyal and Inbar (2003), school innovativeness has three main components, including the capacity to explore new educational opportunities, the tendency to take action and exploit the opportunity, and the changes that implemented innovations created in the schools' performance (Eyal & Inbar, 2003).

In a recent study, Xaba and Malindi (2010) specified entrepreneurial characteristics of the principals in historically disadvantaged schools. The researchers concluded that principals in such schools unconsciously practice innovativeness, pro-activeness and risk-taking, in order to overcome the constraints in the school environment, particularly in relation to the required resources.

From the above, it is clear that schools need to be innovative to, amongst other reasons, be successful. The three groups of schools are considered to be successful, and the results of the questionnaire and the loading of the items measuring *innovativeness*, also indicate that this inclination towards innovation is imperative for school success to create new educational opportunities.

The second factor, labelled *competitive aggressiveness*, comprised of four items. All four items (Comp 2; Comp 3; Comp 1; and Comp 4) intended to measure the latent variable *competitive aggressiveness* (Table 6.2), loaded onto the factor.

Lumpkin and Dess (1996:149) describe competitive aggressiveness as firms' propensity to directly and intensely challenge its competitors to achieve entry or improve position, that is, to outperform industry rivals in the marketplace. According to Lumpkin and Dess (2001:433), it is characterised by a strong offensive posture, directed at overcoming competitors, and may also be quite reactive as when a firm defends its market position or aggressively enters a market that a rival has identified.

Lubienski (2003:395) explains that few ideas are more closely associated with schools than the notion of innovation. Much of the thinking on school choice proceeds from the premise that public schools are necessarily bound by bureaucratic regulations, inhibiting innovation and enforcing uniformity in the way that children are educated. Many reformers argue against such a "one-size-fits-all" model for education and believe that market-style mechanisms of consumer choice and *competition* between autonomous schools will encourage diverse and innovative approaches for increasing achievement.

All the items measuring *competitive aggressiveness*, loaded onto this factor, which indicates that the schools typically are intensely competitive and adopts a very competitive "undo-the-competitor" posture. The schools survive in the education market by effectively assuming an aggressive posture to combat industry trends that may threaten their survival or competitive position. Most of the selected schools are well-known in the educational sector, for excellence in service delivery and educational

outcomes, but it seems that these schools know when an overly aggressive posture can lead to the erosion of their reputation.

The third factor, labelled *autonomy*, comprised of five items. All five of the items (Auto 2; Auto 3; Auto 4; Auto 1; and Auto 5) used to measure the latent variable, *autonomy* (Table 6.2), loaded significantly onto Factor 3.

Lumpkin *et al.* (2009:47) explain that the independent spirit and freedom of action, necessary to advance new venture development, is a driving force of entrepreneurial value creation (Burgelman, 2001). Lumpkin and Dess (1996:140) add that for entrepreneurship to thrive in many business contexts, “the exercise of autonomy by strong leaders, unfettered teams, or creative individuals who are disengaged from organisational constraints”, is required. Autonomy affords organisational members the freedom and flexibility to develop and enact entrepreneurial initiatives.

Chang *et al.* (2015:316) stress that recent accountability measures have taken a toll on principals’ autonomy. Connelly (2009:64) argues that the new age of increased educational accountability policies encroach on principals’ autonomy, thus rendering them less effective in governing their schools. Principals often face conflict between their need to be autonomous to meet the specific needs of their schools, and the requirements to comply with top-down mandates and accountability policies.

Schmerler (2002:370) notices that many educators and policy-makers have realised that in order to do their best work, schools need the luxury of freedom. Just as autonomous cultures in the business world have improved employee morale, increased innovation, and encouraged a more nimble, customer-focused workforce, greater autonomy can free educators to try new approaches within instruction, staffing, and schedules, so that they can respond quickly and more effectively to student needs.

From the results of the study, it seems that the educators at the successful schools have the autonomy to teach without continual supervision, and to use creative and

different methods to teach. As indicated, educators must have the freedom to make decisions, within the parameters of educational law and regulations, without going through elaborate justification and approval procedures. Autonomy is the antecedent of self-esteem and self-worth of educators, or any other workforce.

The fourth factor, which comprised of three items, was labelled *pro-activeness*. Three of the four items (Proac 2; Proac 1; and Proac 3 (Table 6.2) intended to measure the latent variable, *pro-activeness*, loaded onto the factor. One item, Proac 4, was deleted as there was no positive correlation.

De Massis *et al.* (2013:2), show that the studies of many scholars find that pro-activeness is a forward-looking perspective, characterised by the pursuing and anticipation of future wants and needs in the marketplace. Thus, explain Eggers *et al.* (2013:2), pro-active firms capitalise on emerging opportunities and beat competitors by shaping the environment and obtaining a competitive advantage, by anticipating future demand changes.

Pihie *et al.* (2014:3) describe envisioning of the future and the creation of a scenario of innovative possibilities, as the biggest challenge of an entrepreneurial leader. To face this challenge, the leaders need to be pro-active and anticipate future possibilities, create and develop various entrepreneurial opportunities and take the risks to enact the vision.

From the answers of the respondents, it seems that the selected schools are often the first to introduce or seek new services, and/or learning areas, and/or sport codes, and/or educational processes which are usually the actions that competitors respond to. Pro-activity is important for the survival and sustainability of the school, therefore market trends and the identified future needs of learners are continuously monitored.

Furthermore, the exploratory factor analysis conducted, indicated that the dependant variables, namely the success factors of secondary schools, loaded as a set of the four

broad factors namely school leadership, teaching and learning, learner behaviour and learners.

School leadership is divided into three sub-factors, namely *leadership*, *evaluating school performance* and *staff development*.

- **Leadership.** All 11 items intended to assess *leadership* loaded on the factor which is consistent with studies on school leadership.

Sammons and Day (2016:13) provide the following useful description of effective principals. Effective principals provide a clear vision and sense of direction for the school (Lead 5). They prioritise and focus the attention of staff on what is important and do not let them get diverted and side-tracked with initiatives that will have little impact on the work of the students (Lead 6). They know what is going on in their classrooms and they have a clear view of the strengths and weaknesses of their staff. They know how to build on strengths and reduce weaknesses, and can focus their programme of staff development on the real needs of their staff and school. They gain this view through a systematic programme of monitoring and evaluation. Their clarity of thought, sense of purpose and knowledge of what is going on, means that effective principals can get the best out of their staff, which is the key to influencing work in the classroom and to raising the standards achieved by students (Sammons & Day, 2016:13).

Du Plessis (2013:79) highlights that instructional leadership is central to school improvement (Lead 1). The tasks of organising, coordinating, monitoring and supporting teachers in their efforts to provide high-quality learning opportunities (Lead 4) for learners are essential to building a strong instructional programme that reaches every classroom. Boudreaux, Martin and McNeal (2016:42) stress that it is the role of the school leaders to provide a work environment that facilitates student success.

Pihie *et al.* (2014:1) describe entrepreneurial leadership, as a subset of *Leadership*; as a distinctive type of leadership required for dealing with challenges and crises of the current organisational settings. This type of leadership has been emphasised to create a supportive environment for change (Lead 10) and innovations at schools. Among the personal competencies that have been specified for entrepreneurial leaders, pro-activeness (Lead 8), innovativeness, and risk-taking (Lead 9) are the most cited ones that indicate entrepreneurial orientations at both personal and organisational levels.

According to Day (2007:21), high expectations (Lead 4); strong self-esteem; persistence; assertiveness; achievement orientation (Lead 3); learning centeredness: open communication (Lead 7); concern for educating the whole person based on clearly articulated values; concern for the rights of students, inclusivity, social justice, involvement in every aspect of the school (Lead 2) and democratic principles, are the most important functions of a successful principal.

- **Evaluating School Performance.** All four items loaded onto the factor.

Sammons and Day (2016:6) explain that school self-evaluation can be a fundamental force in achieving school improvement (Eval 1). Blaik, Hourani and Litz (2016:247) explain that global educational trends and expectations for school improvements place schools at a crossroad. In times of change, school self-evaluation (SSE) is pivotal for facilitating and functionalising school reforms. In the National Policy on Whole-School Evaluation (2001), a combination of internal self-evaluation and external evaluation, according to the same set of prescribed criteria is advocated, and this is now the type of evaluation being done in South African schools (Lead 2).

- **Staff Development.** All seven of the intended items loaded onto this factor.

Du Plessis (2013:81) determines that higher performing high school principals spend more time directly supervising and supporting teachers, working

collaboratively with teachers to coordinate their schools' instructional programmes (Staff 2), and supporting staff development opportunities (Staff 1). Sammons and Day (2016:3) explain that principals focus the attention of staff on what is important and do not let them get diverted or side-tracked with initiatives that will have little impact on the work of the students (Staff 6).

Villegas-Reimers (2003:11) explains that for years the only form of professional development of teachers was staff development or in-service training, usually consisting of workshops or short-term courses that would offer teachers new information on a particular aspect of their work. This was often the only type of training teachers would receive, and was usually unrelated to the teachers' work (Staff 4). Only in the past few years has the professional development of teachers been considered *a long-term process that includes regular opportunities and experiences, planned systematically to promote growth and development in the profession* (Staff 3).

In transforming the South African education system, it is important that teachers are suitably equipped to address the needs and challenges of their environments. The National Policy Framework for Teacher Education and Development is an endeavour aimed at providing suitably qualified teachers in South Africa (Republic of South Africa, 2006). This policy identifies two complementary sub-systems: initial professional education of teachers; and continuing professional development for teachers (Staff 5) (CPDT) (Republic of South Africa, 2007).

Teaching and Learning is divided in three sub-factors, namely *emphasis on academics*, *class size* and *high quality of teaching and learning*.

- **Emphasis on academics.** Six of the seven intended items loaded onto this factor. One item, Acad 4, was deleted.

Moeller, Theiler and Wu (2012:153) define goal setting as the process of establishing clear and usable targets of objectives for learning. Research has linked mastery and performance achievement goals (Acad 6) to very distinct ways of thinking about oneself and learning activities. Rivkin, Hanushek and Kain (2005:419) say that students and parents often refer to differences in teacher quality and act to ensure placement in classes with specific teachers (Acad 3). Van Hof (2012:5) defines academic emphasis as a school's campaign for academic excellence.

Hoy, Tarter and Hoy (2006:434) define academic emphasis as the extent to which a school is driven by a quest for academic excellence - a press for academic achievement (Acad 1). High, but achievable academic goals are set for students: the learning environment is orderly and serious; students are motivated to work hard; and students respect academic achievement (Acad 2).

Roney and Coleman (2011:1) indicate that successful school leaders exhibit a bias towards academic emphasis and use their positional authority to guide teachers and students to higher academic achievement (Acad 5).

- **Class size.** Both items loaded onto the factor.

Jepsen (2015:8) indicates that smaller classes are generally associated with higher student achievement, but the evidence is far from unanimous (Classz 1). Lazear (2001:779) provides a model in which students who attend a smaller class learn more because they experience fewer student disruptions during class time, on average (Classz 2). UNESCO (2015:2) disagrees, by adding that learners in large classes can learn just as well as those in small classes. What counts is not the size of the class, but the quality of teaching.

- **High quality of teaching and learning:** Five of the nine items, Qual 2; Qual 3; Qual 1; Qual 4; and Qual 5 loaded onto this factor. Four items were deleted.

Sammons and Day (2016:20) indicate that principals must promote collegial discussions of teaching and how it impacts on student achievement, provide active oversight and coordination of the teaching programme (Qual 3 and Qual 2), observe in classrooms and provide feedback that teachers describe as useful (Qual 5 and Qual 1), ensure systematic monitoring of student progress, and make use of assessment results for programme improvement.

Bush and Heystek (2006:68) show that South African principals are mainly concerned with financial management, human resource management, and policy issues. The 'management of teaching and learning' was ranked only seventh of 10 leadership activities in a survey of more than 500 Gauteng principals (Qual 3).

Learner behaviour is divided in three sub-factors, namely *safe schools*, *discipline* and *parental involvement*.

- **Safe schools.** Five of the six items loaded onto this factor. One item, Disc 5, intended to measure discipline, also loaded onto this factor.

Fedsas (2015) highlights that governance and management are essentially about effective leadership. It can be used as a mechanism to create applicable processes, systems and controls, as well as the appropriate behaviour to ensure sustainability and long-term continuity in an institution (such as a school). In addition, it helps to ensure that decisions are made in the best interest of the school and its stakeholders (Safe 6).

Gonsoulin, Zablocli and Leone (2012:309) find that parents, educators, law enforcement officers, and communities agree that creating and maintaining safe schools is critical for the development of children and the well-being of society. Staff development can play a critical role in shaping the ways in which schools respond to students' misbehaviour (Safe 5).

The National School Climate Council (2007:4) recommends that school climate and a positive and sustained school climate be defined in the following ways:

School climate is based on patterns of people's experiences of school life, and reflects its norms, goals, values, interpersonal relationships, teaching and learning practices as well as organisational structures. A sustainable, positive school climate fosters youth development and the learning necessary for a productive, contributing, and satisfying life in a democratic society.

This climate includes norms, values, and expectations that support people socially, emotionally (Safe 3) and physically (Safe 3). People are engaged and respected. Students, families and educators work together to develop, live, and contribute to a shared school vision. Educators model and nurture an attitude that emphasises the benefits of, and satisfaction from learning. Each person contributes to the operations of the school, as well as the care of the physical environment (Safe 2).

Bucher and Manning (2005:56) stress that schools should also be *intellectually safe* (Safe 4), where students can think, doubt, and question what they are learning, and even make mistakes in a secure environment.

- **Discipline.** Three of the intended items loaded onto this factor. Paren 1, intended to measure parental involvement and Safe 1, intended to measure safe schools, also loaded onto this factor. Three items were deleted.

Sammons and Day (2016:21) explain that the principal is responsible to ensure consistent discipline routines and to identify and resolve conflicts quickly and effectively. Walsh (2015:60) explains that schools have a fundamental place in the lives of children, families, and society. Among their many functions, schools are charged with providing a safe learning environment. Recent school-based tragedies around the world highlighted the importance of safety measures and

responses to violence and threats of violence. There is little argument that extreme measures are necessary and justifiable in dangerous situations.

Mestry and Khumalo (2012:97) explain that, in order to enable effective learning to take place, it is critical that a safe, secure and positive environment is created (Disc 1) (Joubert & Squelch, 2005:23). In the context of this study, a disciplined environment refers to an environment free of any disruptive behaviour (Disc 4), which mostly relates to behaviour or actions by learners that may negatively affect their education, or that may interfere detrimentally with the atmosphere conducive to learning in the classroom or any other school activity (Safe 1) (Rossouw, 2007:395). Bej (2016:84) asserts that positive discipline can help teachers develop classrooms where students are taught the skills needed to respect and learn how to cooperate with each other. It also helps teachers to set a classroom climate where there is acceptance, respect, and encouragement (Disc 2).

Salleh, Mohammed, Taib and Mohammed (2008:79) highlight that academic benefits of parental involvement in schooling are well established. Studies also indicate the positive impact of parental involvement in the discipline of their children (Paren 1).

- **Parental involvement.** Seven of the eight items loaded onto this factor. Paren 1 loaded on *discipline*.

Mestry and Grobler (2007:166) show that parent involvement may be interpreted as parents' commitment to the education of their children, and the role they play in school management. Parents' participation in school can enhance student learning and behaviour (Paren 7), spread workloads, offer more experiences to the students and spread the good news and encouragement to the community, of the fine job being done by their teachers and students.

Rapp and Duncan (2012:3) claim that parental involvement is an important indicator of students' success in school (Paren 1). As the relationship between parents and school becomes more connected, student achievement increases (Paren 6). For school leaders, the ability to create and implement an effective parental involvement model is an essential component of increasing student achievement in school (Paren 2).

Jeynes (2005:245) provides an operational definition of parental involvement to support his meta-analysis of forty-one studies on that topic. He defines parental involvement as parental participation in the educational processes and experiences of their children (Paren 3). Makgopa and Mokhele (2013:220) perceive parental involvement as a combination of supporting student academic achievement and participating in school-initiated functions.

Graham-Clay (2016:117) says that teachers must strive to establish partnerships with parents to support student learning. Strong communication is fundamental to these partnerships and to building a sense of community between home and school. In these changing times, teachers must continue to develop and expand their skills in order to maximise effective communication with parents (Parent 4).

Domina (2005:242) indicates that parental involvement is found to be related to fewer behavioural problems in school, better attendance (Paren 8) and class preparation (Simon, 2001:14), better course completion, (Simon, 2001:16) and lower dropout rates (Rumberger, 1995:621). Dwyer and Hecht (1992:279) show that parent involvement has also been linked to reducing the drop-out rate of high school students (Paren 6).

Learners are divided into four sub-factors, namely learner self-esteem, monitoring pupil performance, feedback and high expectations.

- **Learner self-esteem.** All of the five items loaded onto this factor.

Neff (2011:1) define self-esteem as an evaluation of our worthiness as individuals; a judgment that we are good, valuable people. According to Aryana (2010:2474), self-esteem, as one of the most influential factors affecting learners' academic achievement, is receiving increased attention (Lnrself 1). It has been established that high self-esteem can lead to high academic achievement. High self-esteem helps individuals to view themselves as active and capable persons, to promote changes through effort, and to set higher goals which cause new learning experiences.

According to Bauman (2012:7), self-esteem is one of the factors influencing academics. While family, others' expectations, and learning approaches do affect academics, self-esteem has the strongest impact on learning, and that improving self-esteem is important. A low self-esteem can affect achievement in the classroom.

Kort-Butler and Hagewen (2011:569) show that low self-esteem is linked to problems such as life dissatisfaction, physical health problems, depression, substance abuse, suicidal, and aggressive behaviour (Lnrself 3).

Vishalakshi and Yeshodhara (2012:84) indicate that a high level of self-esteem brings a high level of confidence, problem solving abilities (Lnrself 2) and assertiveness; thus, elevating the performance or achievement level of the pupils (Lnrself 5).

According to Hughes and Pickeral (2013:3), teachers, staff, learners, parents and principals working together are a powerful leadership lever. Schools need to recognise and develop leadership among many different kinds of individuals, representing all education stakeholders, to effectively model and develop a

school climate that engages adults and students in a shared mission that improves student development and enhance learner self-esteem (Lnrself 4).

Learner self-esteem was important to the respondents and the teachers, in collaboration with the principal (Lnrself 4). They should work effortlessly to create positive school climates. The educators at the participating schools know that self-esteem can be associated with higher academic results (Lnrself 1), which stem from problem-solving skills (Lnrself 2). As previously described, learning can only take place in a structured environment and higher levels of self-esteem decrease risk behaviour of learners (Lnrself 3). The educators work hard and effortlessly because they are aware that academic achievement can lead to higher self-esteem in learners (Lnrself 4).

- **Monitoring pupil performance.** All of the six items loaded onto this factor.

Safer and Fleischman (2012:81) explain that in today's education climate, school success is defined as ensuring achievement for every student (Moni 1). To reach this goal, educators need tools to help them identify students who are at risk academically, and adjust instructional strategies to better meet these students' needs. Student progress monitoring is a practice that helps teachers use student performance data to continually evaluate the effectiveness of their teaching and make more informed instructional decisions (Moni 4).

Romero-Zaldivar *et al.* (2011:1) insist that an important factor that contributes toward the effectiveness of a learning experience (Moni 1), is the ability of teachers to monitor the overall learning process and potentially act based on the observed events.

Research demonstrates that when teachers use student progress monitoring, students learn more, teacher decision-making improves, and students become more aware of their own performance (Moni 5). A significant body of research

conducted over the past 30 years show this method to be a reliable and valid predictor of subsequent performance on a variety of outcome measures, thus it is useful for a wide range of instructional decisions (Moni 4) (Safer & Fleischman, 2012:81). Shapiro (2011:141) explains that progress monitoring can be used to create instructional groups, identify specific skill deficits (Moni 5), screen students for potential early school failure (Moni 2), and assist in responsible decision-making. The South African school system, like many other in the world, prescribes that managerial staff monitors the quality of teaching and learning through class visits (Moni 6) (SACE, 2014:2).

- **Feedback.** All three of the items loaded onto this factor.

Laurillard (2002:55) claims that an established principle of good practice is that 'action without feedback is completely unproductive for a learner'. Burnett (2001:21) reports that 91% of children wanted to be praised for their achievements and behaviour (Feed 2).

Partin *et al.* (2010:173) claim that teacher praise as contingent on, or as a consequence of, appropriate student behaviour, is a classroom and behavioural management strategy with a long and thorough base of empirical support. Across age groups of teachers' use of contingent praise effectively reinforced, or increased, a variety of appropriate student behaviour and academic skills (Feed 3).

Coe *et al.* (2014:5) explain that a daily feedback routine (Feed 2) should be structured by every teacher, explicitly as a continuous professional learning opportunity, enabling them to work on improving student outcomes which will ultimately lead to school effectiveness (Feed 1).

- **High expectations.** Four of the five items loaded onto this factor. One item, High 5, was deleted.

Educational research, according to Zhang (2014:3), has identified many factors that could influence student school achievements (High 2 and High 1), including teacher educational expectations, as well as teacher and student perceptions of student school experiences. There are numerous studies exploring the relationships between teacher expectations of students' future school attainment and student school achievements.

Stronge (2002:37) states: "high expectations represent an overall orientation toward improvement and growth in the classroom, which has been demonstrated to be a defining characteristic of benchmark schools.... Effective teachers not only express and clarify expectations for student achievement (High 4), but also stress student responsibility and accountability for striving to meet those expectations".

Alarming, and applicable on the situation in South Africa, Zhang (2014:5) warns that in general, teachers tend to have lower educational expectations for students from low income families, as compared with their peers from higher income families, as well as for students from minority groups. At the same time, students from disadvantaged families tend to have lower expectations themselves (High 3).

7.2.4 The relationship between the dependent and independent variables

Cooper and Schindler (2008:115) explain that multiple linear regression analyses are used to predict the effect on a dependent variable, by several independent or explanatory variables. It allows for the simultaneous investigation of the effect of two or more independent variables.

Due to the fact that the correlation is drawn from a sample, it was important to determine the significance or p -level. In this study a p -level of $p < 0.005$ is considered a strong significance and $p < 0.10$ is seen as acceptable. A p -level greater than 0.10 would

result in a rejection of the hypothesis, as it would indicate that any correlation between the two variables could be due to chance and not necessarily due to the effect of the independent variable on the dependent variable (Field, 2009: 637).

The effect of entrepreneurial orientation on perceived school success was determined by the use of multiple regression analyses. The results reveal the following:

Autonomy has a positive influence on *leadership* ($p<0.001$), *evaluating school performance* ($p<0.01$), *staff development* ($p<0.001$), *emphasis on academics* ($p<0.05$), *quality of teaching and learning* ($p<0.001$), *safe and orderly schools* ($p<0.001$), *discipline* ($p<0.05$), *learner self-esteem* ($p<0.05$), *monitoring of pupil performance* ($p<0.01$), *feedback* ($p<0.05$), and *high expectations* ($p<0.05$).

No positive influence was observed between *autonomy*, *class size* ($p=0.618$) and *parental involvement* ($p=0.052$), respectively.

The conclusion can be drawn that the schools and teachers, with an inclination towards autonomy, have a significant effect on the success of schools, which can be explained by the positive influence of autonomy on the above-mentioned 11 items measuring school success. The fact that autonomy has no effect on *class size* can be explained by the fact that the South African school system is centralised and the educator-learner-ratio (LER) is determined and regulated by strict policies and educational law (De Lannoy & Hall, 2012:2). The fact that there is no positive influence of autonomy on *parental involvement* can be explained by parents with limited or negative school experiences. Active participation (i.e. as a parent) may seem overwhelming, frightening or intimidating (Makgoba & Mokhele, 2013:220). The involvement of parents in school activities can be hindered by a school's expectations of them. For example, Martin (1999:50) finds that 'the good parent was the one who supported the culture of the school, attended when required, but did not interfere with professional practice'.

In summary, the empirical and literature research shows that principals and educators should focus on developing autonomy with respect to *class size* and *parental involvement*. Schools in Group A and Group B can exert more autonomy towards *class size*, as the schools in these groups have the financial means to lower the LER on their own expense. Government should reconsider the LER for schools in Group C. It is the responsibility of principals and teachers to create a positive learning experience for all learners and to improve *parental involvement* for now and the future.

Innovativeness has a positive influence on *leadership* ($p<0.001$), *evaluating school performance* ($p<0.001$), *staff development* ($p<0.001$), *emphasis on academics* ($p<0.001$), *quality of teaching and learning* ($p<0.001$), *safe and orderly schools* ($p<0.001$), *discipline* ($p<0.001$), *parental involvement* ($p<0.001$), *learner self-esteem* ($p<0.001$), *monitoring of pupil performance* ($p<0.001$), *feedback* ($p<0.001$) and *high expectations* ($p<0.001$).

No positive influence was observed between innovativeness and *class size* ($p=0.101$)

The conclusion can be drawn that the schools and teachers with an inclination towards innovativeness, have a significant effect on the success of schools, which can be explained by the positive influence of innovativeness on the above-mentioned 12 items measuring school success. The fact that innovativeness has no effect on class size, can be explained by the fact that, especially in South Africa, the classes are very big and not conducive to high quality teaching and learning. The schools in Group C are all located in deprived communities and the abilities of the learners in the classes are very diverse due to their backgrounds, educational levels of parents, poverty and the availability of resources. Schools in groups A and Group B do have the ability to be innovative with *class size*, due to their access to resources.

In summary, the empirical and literature research show that principals and educators should focus on developing innovativeness with respect to *class size*. The conclusions of a study by Krueger (1999:497) reveals that, on average, performance on

standardised tests increases by four percentile points the first year students attend small classes. The test score advantage of students in small classes expands by about one percentile point per year in subsequent years, and that class size has a larger effect for minority students. UNESCO (2015:2) disagrees, by adding that learners in large classes can learn just as well as those in small classes. What counts is not the size of the class, but the quality of teaching. However, large classes have a severe impact on teachers and their levels of motivation. Furthermore, teacher motivation is complicated in many resource-poor countries. It is therefore the responsibility of teachers and principals to overcome the boundaries of large classes, by being *innovative* with the presentation of lessons and in the methods of classroom management.

Pro-activeness has a positive influence on *class size* ($p=0.01$), *discipline* ($p=0.023$), *parental involvement* ($p<0.001$), and *learner self-esteem* ($p<0.001$).

No positive influence was observed between *pro-activeness*, *leadership* ($p=0.194$), *evaluating school performance* ($p=0.485$), *staff development* ($p=0.237$), *emphasis on academics* ($p=0.075$), *high quality of teaching and learning* ($p=0.087$), *safe and orderly schools* ($p=0.326$), *monitoring pupil performance* ($p=0.093$), *feedback* ($p=0.925$) and *high expectations* ($p=0.572$).

The conclusion can be drawn that the schools and teachers with an inclination towards pro-activeness, have a significant effect on the success of schools, which can be explained by the positive influence of innovativeness on the above-mentioned 4 items, measuring school success.

In summary, the empirical and literature research shows that principals and educators should focus on developing pro-activity to increase school success. The fact that pro-activeness has no effect *leadership* is a matter of concern. Pihie *et al.* (2014:3) explain that by being pro-active, entrepreneurial leaders not only explore new opportunities for entrepreneurial activities, but also step into action and exploit the opportunities to

improve the business' (schools') performance. Entrepreneurial leadership must be cultivated at the school.

Evaluating school performance: MacBeath (2005:4) defines school self-evaluation as a process of reflection on practice, made systematic and transparent, with the aim of improving pupil, professional and organisational learning. Pro-active leaders will act upon threats that put the survival or competitive advantage of the school on the line.

Emphasis on academics and high quality of teaching and learning: Goddard *et al.* (2000:684) explain that school effectiveness requires a focus on student learning and a rigorous instructional program. The authors believe that academic emphasis, or the extent to which a drive for academic excellence contributes to the behavioural and environmental press of the school, is important to school success. The principal must pro-actively set high, but achievable goals for the school and for all the learners. The principal must oversee the curriculum, set the framework for curriculum planning, and ensure the delivery of the curriculum.

Staff development: Ono and Ferreira (2010:59) indicate that the literature considers professional development of teachers as one of the key elements in most of the educational reforms currently in progress in the world. The principal must identify the professional needs of educators in order to increase their cognitive and technical skills. The principal must aim the development programmes to contribute to learner performance.

High expectations: Ozturk and Debelak (2005:1) explain that success in any meaningful endeavour is marked by a history of high expectations that provide the challenge and inspiration necessary to press the individual to his/her highest level of performance. Principals must pro-actively set high expectations for learners and remind teachers continuously that perceptions of teachers can influence performance.

Competitive aggressiveness has a positive influence on *leadership* ($p<0.001$), *staff development* ($p<0.001$), *emphasis on academics* ($p<0.05$), *class size* ($p<0.05$), *safe and orderly schools* ($p<0.01$), and *parental involvement* ($p<0.001$).

No positive influence was observed between *competitive aggressiveness*, *evaluating school performance* ($p=0.481$), *high quality of teaching and learning* ($p=0.056$), *discipline* ($p=0.638$), *learner self-esteem* ($p=0.408$), *monitoring pupil performance* ($p=0.481$), *feedback* ($p=0.288$), and *high expectations* ($p=0.311$).

The conclusion can be drawn that the schools and teachers with an inclination towards competitive aggressiveness, have a significant effect on the success of schools, which can be explained by the positive influence of competitive aggressiveness on the above-mentioned 6 items measuring school success.

In summary, the empirical and literature research shows that principals and educators should focus on developing competitive aggressiveness to enhance school success. Competitive aggressiveness has no effect on *evaluating schools performance*. To survive, schools need to compete aggressively to stay relevant in the market. The principal and staff must perform a whole school evaluation to determine areas of improvement in order to stay ahead of competitors. Action plans to undo the competitors in the field should be articulated to staff. All the schools that participated in the study are considered to be successful, but it seems that some respondents may feel that their schools are not doing enough in terms of the *quality of teaching and learning*. This item can be considered as the most important item for school success and important to improve, in order to compete in the market, and stay relevant with a competitive advantage.

Mtsweni (2008:1) stresses that sound *discipline* and *safety* underpins every aspect of the school life. Schools can easily lose their relevance in society if effective learning is disrupted by discipline problems. Schools are often compared in terms of the behaviour

of learners, and have to compete against each other to provide a safe learning environment.

Vishalakshi and Yeshodhara (2012:83) show that the academic achievement of students is influenced by so many factors, such as student related, teacher related and school related factors. Among them, *self-esteem* is considered to be very important. From the fact that there is no relationship between competitive aggressiveness, *self-esteem and high expectations*, it is evident that some teachers realise the advantages of high self-esteem, and the setting of high expectations for learners. These can only been cultivated in a positive school climate, for which the principal is responsible. A positive school climate attracts learners; therefore schools can compete on this basis.

7.2.5 Variance Analyses

Woltman *et al.* (2012:52) describe a Hierarchical Linear Modelling (HLM) as a complex form of Ordinary Least Squares (OLS) regression, used to analyse variance in the outcome variables because of the fact that the predictor variables are at varying hierarchical levels.

The results of the Hierarchical Linear Modelling yielded the following results:

7.2.5.1 Statistically Significance (*p*-values)

P-values were reported in Chapter 6 for the sake of completeness, but were not interpreted since a convenience sample, instead of a random sample, was used.

7.2.5.2 Statistical Significance (effect sizes)

- **Hierarchical Linear Modelling (HLM) results: Autonomy**

The difference between Group A and Group C leans towards medium (0.38), which indicates practical non-significant to practical visible differences. The estimated mean of Group A (3.960), indicates that the respondents agree, leaning towards strongly agree with the statements of *autonomy*, whilst the respondents of Group C, on average agreed with the statements within this factor. The respondents agree that they have to ensure autonomy in the execution of their teaching, and that the schools need to promote creativity, problem-solving and alternative teaching methods to reach their goals. The communication levels are flattened and they can make autonomous decisions without elaborate justification and approval procedures.

- **HLM results: Innovativeness**

The difference between Group A and Group C is medium, leaning towards large (0.67), which indicates a practically visible difference to practical significant difference. The difference between Group A and Group B leans towards medium (0.41), which indicates a practically non-significant to practical visible difference. The estimated mean of Group A (3.910) indicate that the respondents agree, leaning towards strongly agree with the statements of *innovativeness*. The respondents of Group B and Group C, on average, agree with the statements within this factor. The respondents share the notion that the schools place a strong emphasis on new and innovative services, learning areas, sport codes and/or processes. They agree that their schools are continually pursuing new opportunities and have increased their offering during the past two years.

- **HLM results: Pro-activeness**

The difference between Group A and Group C is medium (0.53), which indicates a practically visible difference. The estimated mean of Group A (3.696) indicates that the

respondents agree, but lean towards neutral with the statements of *pro-activeness*, whilst the respondents of Group C, on average, are neutral towards the statements within this factor. The respondents of Group A agree that their schools are often the first to introduce new services, learning areas, sport codes and processes, and that their schools typically initiate actions that competitors respond to.

- **HLM results: Competitive aggressiveness**

The difference between Group A and Group C is medium (0.58), which indicates a practically visible difference. The difference between Group A and Group B leans towards medium (0.48), which indicates a practically non-significant to practically visible difference. The estimated mean of Group A (3.801) indicates that the respondents agree, although at the higher end of neutral, with the statements of *competitive aggressiveness*, whilst the respondents of Group B and Group C on average are neutral towards the statements within this factor. The respondents of Group A agree that their schools are intensely competitive and they assume an aggressive posture to combat industry trends that may threaten the survival or competitive position of their schools.

- **HLM results: Emphasis on academics**

The difference between Group A and Group B leans towards medium (0.45), which indicates a practically non-significant to practically visible difference. The estimated mean of Group A (4.294) indicates that the respondents agree, leaning towards strongly agree with the statements of *emphasis on academics*, whilst the respondents of Group B, on average, agree with the statements within this factor. The respondents share the fact that their academic results can be attributed to the emphasis on academics, and that learners attend the schools because of this. Furthermore, they agree that the principal plays an active role in the setting of high expectations for learners and staff.

- **HLM results: Safe and orderly schools**

The difference between Group A and Group B leans towards medium (0.35), which indicates a practically non-significant to practically visible difference. The estimated mean of Group A (4.290) indicates that the respondents agree, leaning towards strongly agree, with the statements of *safe and orderly Schools*, whilst the respondents of Group B, on average, agreed with the statements within this factor. The respondents share the notion that effective teaching and learning can only take place in a safe (physical, psychological and intellectual) and secure school environment. The respective schools are characterised by the professional conduct of staff, good management and governance.

- **HLM results: Discipline**

The difference between Group A and Group C leans towards medium (0.36), which indicates a practically non-significant to practically visible difference. The estimated mean of Group A (4.546) indicates that the respondents agree, leaning towards strongly agree with the statements of *discipline*, whilst the respondents of Group C on average agree with the statements within this factor. The respondents agree that discipline has a positive impact on school culture, and it underpins successful teaching and learning in a safe and secure environment. They furthermore agree that disruptive behaviour affects learners' readiness to learn.

- **HLM results: Parental involvement**

The difference between Group A and Group B is medium (0.57) which indicates a practically visible difference. The estimated mean of Group A (3.926) indicates that the respondents agree with the statements of *parental involvement*, whilst the respondents of Group B on average agree with the statements within this factor. The respondents share the notion that parental involvement has a positive behavioural outcome, which leads to an increase in academic achievement with lower drop-out rate, retention rate

and a decrease in learner absentees. The respondents perceive the parents as academically involved, who share the mission and vision of the schools

- **HLM results: Leadership, evaluating school performance, staff development, learner self-esteem, monitoring learner performance, feedback and high expectations.**

The differences between Group A, Group B and Group C are small (0.02–0.34), which indicates practically non-significant differences.

7.2.6 Correlation between dependent and independent variables.

The correlation between the dependent and independent variables was established using a Spearman's rho, which measures the strength of association of two variables Chok (2008:5).

7.2.6.1 Results of Spearman's rho: Reliability

Bryman and Bell (2015:169) explain that Cronbach's alpha is a commonly used test of internal reliability. According to Bagozzi (1994:18), a value of 0.6 would be acceptable, although 0.7 is preferred to indicate a higher level of reliability. The test yielded Cronbach alpha coefficients ranging from 0.720–0.800, which indicates that the measuring instrument is reliable.

7.2.6.2 Results of Spearman's rho: Correlation between the dependent and independent variables.

The 13 dependent variables were grouped together in four broad factors (school leadership, teaching and learning, learner behaviour and learners), and a correlation between the four factors and the independent variables had to be established.

The internal reliability of the four broad factors is tested through Cronbach's Alpha. As previously indicated, reliability tests determine whether the instrument produces consistent results when the test is repeated. This can be tested via Cronbach's alpha. (Bryman & Bell, 2015:169).

It was found that the measuring instrument regarding the four broad factors of dependent variables is reliable, as it yielded Cronbach's alpha coefficients ranging from 0.720–0.800.

The Spearman's rho yielded the following results:

The results of the empirical study show practical significant correlations between innovativeness, *school leadership* (0.649), *teaching and learning* (0.584), and *learner behaviour* (0.558), respectively. A practically visible correlation was found between innovativeness and *learners* (0.423). The research findings agree with Park, Kim and Krishna (2014:532), that organisational leaders and managers are regularly searching for ways to make their businesses more innovative, competitive, and successful. The importance of innovation to entrepreneurship was first emphasised by Lumpkin and Dess (1996:141), who proposed that innovation is the single dimension that has to be employed by all entrepreneurial businesses. As previously discussed, Public schools are part of corporate entrepreneurship and the ability to innovate is a prerequisite for school success.

Dess and Lumpkin (2005:151) describe competitive aggressiveness as an intense effort to outperform industry rivals. It is characterised by a combative posture or an aggressive response, aimed at improving position or overcoming a threat in a competitive marketplace. The results of the empirical study confirm this statement and reveal practical significant correlations between competitive aggressiveness, *school leadership* (0.582), *teaching and learning* (0.500) and *learner behaviour* (0.518), respectively. A practically visible correlation was found between competitive aggressiveness and *learners* (0.319). Thus, schools need to adopt a very competitive

“undo-the-competitor” posture to stay relevant in the market and to gain competitive advantage.

The results of the empirical study show practical visible correlations between autonomy, *school leadership* (0.498), *teaching and learning* (0.420), *learner behaviour* (0.394) and *learners* (0.331), respectively. Lumpkin *et al.* (2009:47) show that the independent spirit and freedom of action necessary to advance new venture development, is a driving force of entrepreneurial value creation. Although public education is heavily regulated, the study shows that successful schools make provision and allow autonomous behaviour - an important ingredient for staff motivation and ultimate success.

Furthermore, the study indicates practical visible correlations between pro-activeness, *school leadership* (0.453), *teaching and learning* (0.417), and *learner behaviour* (0.443). The research findings agree with De Massis *et al.* (2013:2) who show that pro-activeness is a forward-looking perspective, characterised by the pursuing and anticipation of future wants and needs in the marketplace. Eyal and Inbar (2003:230) define school principals' pro-activeness as "the willingness to start intrinsically motivated actions, which are not imposed by the authorities". The empirical study shows that the inclination of pro-activeness is crucial for principals and schools to be successful.

No practically significant correlation could be established between competitive aggressiveness and *learners* (0.281).

7.3 RECOMMENDATIONS

This section comprises of two sections, namely a discussion of the recommendations, and action plans to reach the recommendations.

7.3.1 Discussion of recommendations

Public secondary schools in South Africa operate in a highly legislative environment. Change is difficult, but within the parameters of the law, much can be done to fully realise the potential of the school to be successful and effective to serve the community and the learners in South Africa. The following recommendations are made to possibly increase entrepreneurial orientation within public secondary schools.

Strategic entrepreneurial intent. Success is a choice. School governing bodies, school management teams, and principals, must find ways to increase the effectiveness and efficiency of schools, which will ultimately lead to success. Schools are driven by their mission and vision, which are part of their roadmap to success.

Carland, hoy, Boulton and Carland (1984:5) claim that vision is the insight to identify an under-served market; the intuition to design new products, services or methods which can capture markets; and the sixth sense that leads to an understanding of time, place, product and market. Recommendations regarding the establishment or improvement of strategic intent are provided:

- Strategic intent is a high-level statement of the means by which the school will achieve its vision. It is a statement of design for creating a desirable future. Principals and school governing bodies are responsible to develop the statement. This statement must include the principles of entrepreneurship as a means for sustainability and competitive advantage.
- The move to a strategic intent that focuses on entrepreneurship is a change in the culture of the school. The principal must be able to articulate this change in culture to educators and staff.
- A principal with no inclination towards entrepreneurship will be able to include entrepreneurship in the statement. It is vital for school governing bodies to

extend the appointment criteria for principals, to appoint people with a strong entrepreneurial posture, in order to ensure the future of the school.

- It is entrepreneurial vision that guides the act of volition, which culminates in the entire phenomenon of entrepreneurship: the creation of a venture; the guidance and nurture of a venture; and, the growth and development of a venture. It is important for all staff members to take ownership of the shared vision and strategy to be more entrepreneurial. The vision must be translated into an executable mission and should form part of the school development plan. This new way of thinking must be instituted by the decision-makers at the school. They must drive the initiative and set an example of tolerance with the efforts of the staff.

Autonomy. Fernet, Lavigne, Vallerand and Austin (2014:274) describe autonomy in the workplace as the extent to which an occupation or activity provides opportunities to make decisions and exercise control over the tasks to be accomplished. Autonomy and freedom of action at work influence the passion for the work. External controls such as deadlines and mandatory tasks are inevitable, but can influence a teacher's perception of the job. The researcher recommends the following measures to improve autonomy at schools:

- Delegation of power and responsibilities lies at the heart of autonomy. School management teams must give staff the opportunity to act autonomous without continual supervision. This derived authority will enhance the self-esteem and self-worth of educators, in the sense that they feel entrusted with new responsibilities.
- Within the parameters of policies and regulations, heads of departments must be given the opportunity to manage their own departments. The autonomy to manage and make responsible decisions is also an excellent way of leadership development and must be enhanced.

- Educators must be allowed to make decisions in respect of teaching methods and generous recognition must be given for creativity and initiative. It is important to note that this does not mean to give free reign to staff, but within the parameters of the law and policy, there are ample opportunities for teachers to make creative decisions to enhance teaching and learning.

Innovation. Kuratko, Hornsby and Covin (2014:1) highlight that continuous innovation - in terms of products, processes, and administrative routines and structures - is needed to compete effectively in the current highly competitive markets. Executives agree that innovation is the most important pathway for companies to accelerate their pace of change. The study of Govindarajan and Trimble (2005) indicates that corporate entrepreneurship is envisioned to be a process that can facilitate firms' efforts to innovate constantly and cope effectively with the competitive realities companies encounter when competing in world markets. Leading strategic thinkers are moving beyond traditional product and service innovations, towards pioneering innovation in processes, value chains, business models, and all functions of management. The following measures are recommended to improve Innovativeness at schools:

- In order for a school to stay relevant within the market, it is imperative for school management teams to foster and cultivate innovation. The school must serve the immediate market by constantly introducing and improving services, learning areas, sport codes and processes.
- Staff must be encouraged to generate new ideas and consideration should be given to all ideas. To be an innovative school, there must be a positive relationship between the ideas generated and the ideas implemented. The schools in Group C are previously disadvantaged schools, which experienced constant financial strains. It is important to take note that all innovative ideas do not necessarily involve money.

- All staff must be involved in school development and school improvement programmes, and all contributions must be valued. To involve all staff will, once again, enhance the self-esteem and self-worth of staff, especially when they experience that their contributions are given consideration for possible implementation.

Pro-activeness. The study of Shamsuddin, Othman, Shahadan and Zakaria (2012:127) find that pro-activeness has a positive and significant impact on the financial performance of intrapreneurial companies. This is consistent with the finding by Aktan and Bulut (2008), namely that pro-activeness has a positive and significant effect on a firm's financial performance. In the school setting, the school must capitalise on the first-mover advantage. The researcher proposes the following recommendations to improve pro-activeness at school level:

- The school must act pro-actively when the market or policy changes, in order to be first to initiate new services, learning areas, sport codes and processes.
- Schools must monitor market trends to identify possible future needs of learners. Schools must also collaborate with higher education institutions to determine the relevancy of subject offerings.
- The principal with a strong entrepreneurial inclination will have the foresight to avoid problems in the school setting. Principals should be extremely knowledgeable pertaining education and be able to apply what is known, with skill. What is known about the latest in educational practices provides background information to predict what should be.
- Pro-activeness starts with a school self-evaluation. After the different categories have been worked out, teachers and the principal should cooperatively study and evaluate the necessary improvements. A definite knowledge base is needed to predict, only then is pro-action possible. The principal tries to avoid hindrances

and negative results by moving forward to the new and unique. The new and the unique are based on sound educational thinking and quality procedures. This boils down to proper training of principals and the appointment of knowledgeable candidates (Ediger, 1996:274).

- The graduation rate among undergraduate students in South Africa's 23 public universities is but 15 percent, which indicates, amongst other reasons, that there is a serious problem with the quality of students enrolling at universities. This necessitates serious collaboration between the Department of Basic Education and higher education institutions to adapt the school curriculum, in order to prepare learners for further study. This is perfectly in line with the principle of pro-activeness.

Competitive aggressiveness. Ferrier (2001:858) shows that Schumpeter's (1950) theory of "creative destruction", aptly describes head-to-head rivalry between firms as "an incessant race to get or to keep ahead of one another". Especially in hyper-competitive markets, leading firms are relentlessly pursued by existing and unforeseen challengers that aggressively find new ways to satisfy customers (D'Aveni, 1994; Schumpeter, 1950). To stay ahead, leading firms must aggressively disrupt the routine pattern of rivalry "by new ways of doing things and new things to do" (Kirzner, 1973:79). Lumpkin and Dess (1997:48) refer to competitive aggressiveness as the way firms react to competitive trends and demands that already exist in the marketplace.

Belfield and Levin (2002:279) continue that widespread concern about the quality of public education has generated calls for educational reform. They claim that there is consistent evidence of a link between competition and education quality. Their research found a positive correlation between increased competition and higher education quality. The following recommendations are provided to improve or to establish competitive aggressiveness at school level:

- High quality education is the key towards survival in the competitive education market. According to Ladner and Brouillette (2000), schools that provide high-quality education for children, will attract and retain students, while schools that do not, will likely lose students. In such an environment, it should be expected that schools failing to provide an education (service) that students and parents (consumers) want or value, will go out of business.
- Schools may close or lose relevance because their services are inferior to that which is provided by other suppliers of education. It is especially the school relevant to the schools in Group A and Group B, which must adopt a very competitive “undo-the-competitor” posture, due to very intense competition. Schools must combat industry trends that may threaten the survival or the competitive position of the school.
- Principals must encourage healthy competition between staff, departments and subjects to provide the best possible education to learners and the community. As previously mentioned, staff members must be involved and share the values of the school, in order to share the responsibility of providing the best opportunities to learners.

Shared values. Vanourek and Vanourek (2014) find that to develop a high-performing team, a leader must collaboratively develop a set of shared values. Without shared values, sustained high performance is impossible. On a high-performance team, everyone knows the shared values. Policies do not always tell you what to do, but the values guide your behaviour.

For a team, shared values are their moral and operational compasses. Shared values are the core beliefs that guide the behaviours of a group. These values are actively used to make decisions, especially the toughest ones where difficult trade-offs are involved. The researcher recommends the following to establish shared values at school level:

- In schools, the decision to be an entrepreneurial entity and to act entrepreneurially must be a value that is shared by all the staff and should form part of the mission statement of the school.
- Educators must understand the value of an entrepreneurship orientation, which can only be articulated through the actions and example of an entrepreneurial principal. The values must constantly be revisited to inspire staff to rethink every action or motivation to align it with the principles of entrepreneurship.

Entrepreneurial leadership. Pihie *et al.* (2014:1-2) claim that entrepreneurial leadership is a distinctive type of leadership, required for dealing with challenges and crises of the current organisational settings. This leadership style enables leaders to successfully direct their business, and solve the problems through different steps of the business' growth and development. It also has great influence on leaders' competence in recognising new opportunities to improve the business' performance. Entrepreneurial leadership has been emphasised to create a supportive environment for change and innovation at schools. There are different complexities and challenges for schools, such as higher demands for improving the quality of education in public schools, fast changes in the environment, and growing shortages in school resources and funds. Therefore, scholars believe that school principals require entrepreneurial leadership characteristics and the knowledge and competence to execute their tasks, based on leadership principles. The following are recommendations to enhance or establish entrepreneurial leadership at schools:

- The Department of Basic Education needs to change policies to include Entrepreneurship as a basic prerequisite for the appointment of principals. This will help to equip principals to face the complexities and constraints of the school environment in the process of preparing learners for their very competitive future. These competencies will also enable principals to create change and to develop new opportunities for schools.

- The change in policy needs to address the autonomy of principals in order for them to lead their schools on the principles of entrepreneurial orientation. This will enable principals to take advantage of the opportunities in their school environment to mobilise resources, promote new initiatives and lead change in their schools and communities.
- Most principals fulfil the task of administrator and manager. Authorities must re-visit the administrative tasks of the principals so that they can execute their daily task as transformational leaders.
- Higher Education institutions should become involved in designing entrepreneurial training programmes for principals.
- All staff members should be trained to change entrepreneurship into the basic logic and mind-set of the school.
- The high unemployment rate in South Africa necessitates compulsory entrepreneurship education for all learners.

Continuous and cross functional learning. Garvin (1993:15) defines a learning organisation as an organisation skilled at creating, acquiring and transferring knowledge, and at modifying its behaviour to reflect new knowledge and insights. Goh (1998:15) explains that organisational learning is a long-term activity that builds competitive advantage over time and requires sustained management attention, commitment and effort. According to Shaw and Perkins (1991), the role of the leaders is to set the conditions for the business to develop an effective learning capability. Managers need to take strategic action and make specific interventions to ensure that learning can take place.

Goh (1998:16) argues that learning organisations have five strategic building blocks which are made applicable to the current study:

- **Mission and Vision** – Clarity and employee support of the mission, vision, strategy, and espoused values of the business. Every school principal must ensure that every staff member buys into the entrepreneurial mission and vision of the school.
- **Leadership** – Leadership that is perceived as empowering employees, encouraging an experimenting culture, and showing strong commitment to the business. The biggest reward for a teacher is the acknowledgement of efforts, especially when an innovative venture comes off the ground. Management must have patience with experimental efforts of staff members. As previously explained, this will lead to an increase in the self-esteem and self-worth of educators.
- **Experimentation** – A strong culture of experimentation that is rewarded and supported at all levels in the business. Experimentation suggests restlessness with convention and a rejection of the status quo.

There are many opportunities for educators to experiment with classroom practice, discipline, teaching methods, assessments, and communication, to list a few. Teachers must have the freedom to experiment, with the prerequisite that communication channels must be flattened to enhance communication with management.

- **Transfer of knowledge** – The ability of the business to transfer knowledge within and from outside the business, and to learn from failures. At all the selected schools there is ample opportunity for personal growth.

Teachers must be encouraged to stay at the forefront of the developments in education. This knowledge must be shared with colleagues through internal staff development programmes. The age distribution of the respondents who participated in the study is a concern. In total, 30.8% of the respondents are

between 50 and 59 years of age. In reality this means that the most experienced educators are very close to retirement. Principals must ensure that these educators share their experience with the younger and more inexperienced staff members.

- **Teamwork and cooperation** – An emphasis on teamwork and group problem-solving as the mode of operation and development of ideas. The organisational structure at the school should allow for a free-flow of ideas and participation from all staff members. This can be reached by flattening the communication channels.

Educators should be encouraged to work together in cross-functional teams (educators from different phases, departments and learning areas) to facilitate information sharing. Cross-functional teams should have freedom in electing team members. Principals should spell out mandates of cross-functional teams and limit interference thereafter.

Garvin, Edmondson and Gino (2008:3-4) add another three building blocks:

- **Supportive learning environment** – An environment that support learning, has four distinct characteristics, made applicable to the school situation:

Psychological safety – To learn, educators cannot fear being belittled or marginalised when they disagree with peers or management, ask naive questions, own up to mistakes, or present a minority viewpoint. They must be comfortable expressing their own viewpoint.

Appreciation of differences – Learning occurs when educators become aware of opposing ideas. Recognising the value of competing functional outlooks increases energy and motivation.

Openness to new ideas – Learning is not simply about correcting mistakes and solving problems, but also about crafting novel approaches. Employees must be encouraged to take risks and explore the untested and unknown.

Time for reflection – Supportive learning environments allow time for a pause in the action and encourage thoughtful review of the school's processes.

- **A learning organisation is not cultivated effortlessly.** Learning organisations arise from a series of concrete steps and widely distributed activities, not unlike the workings of business processes, such as logistics, billing, order fulfilment, and product development. It is the responsibility of the principal to facilitate processes that involve the generation, collection, interpretation, and dissemination of information. These include experimentation to develop, test and review new products and services; intelligence gathering to keep track of competitive, customer, and technological trends; disciplined analysis and interpretation to identify and solve problems; and education and training to develop both new and established employees.
- **Leadership that reinforces learning.** Organisational learning is strongly influenced by the behaviour of leaders. When Principals actively question and listen to educators — and thereby prompt dialogue and debate — staff at the school feel encouraged to learn. If leaders signal the importance of spending time on problem identification, knowledge transfer, and reflective post-audits, these activities are likely to flourish. When principals demonstrate, through their own behaviour, a willingness to entertain alternative points of view, employees feel emboldened to offer new ideas and options.

Kuratko *et al.* (2014:3) explain that as research on corporate entrepreneurial activity has evolved, numerous researchers have acknowledged the importance of internal organisational dimensions to promote and support an environment for innovation (Hornsby, Kuratko, Shepherd & Bott, 2009; Kuratko, *et al.*, 1990). This research

identified five specific dimensions that are important determinants of an environment conducive to entrepreneurial behaviour: (1) top management support, (2) work discretion/autonomy, (3) rewards/reinforcement, (4) time availability, and (5) organisational boundaries. These underlying organisational dimensions are required for individuals to perceive an innovation-friendly environment. The researcher proposes the following recommendations to improve or implement the five dimensions at school level:

- **Top management support.** The extent to which educators perceive that the principal and school management team support, facilitate, and promote entrepreneurial behaviour, including the championing of innovative ideas, and providing the resources educators require for taking entrepreneurial action. Principals must support the staff in any entrepreneurial/innovative/creative ventures, as management support has been found to have a direct positive relationship with schools' innovative outcomes. Support is important as entrepreneurship may be a totally new field for individual teachers, and without support educators can lose interest and fall back into non-entrepreneurial behaviour.
- **Work discretion.** The extent, to which educators perceive that the school tolerates failure, provides decision-making latitude and freedom from excessive oversight, and delegates authority and responsibility to lower-level managers (e.g. heads of departments) and educators (e.g. subject heads). This is linked to autonomy where principals must ensure that educators have enough autonomy to do their work without continual supervision. Staff must be encouraged to manage their own work and must have the flexibility to resolve their own problems. Staff must be given the opportunity to change or alternate methods and not have to follow the same work methods or steps repeatedly every day and year after year.
- **Rewards and reinforcement.** Reward systems that encourage innovation have been shown to have a strong effect on individuals' tendencies to behave in

entrepreneurial manners. There are no extrinsic rewards for educators in public schools. The IQMS system only allows a salary increase of 1% for the basic achievement of classroom goals. Schools, especially the schools in Group C, are dependent on subsidies from government. Therefore educators must rely on psychological rewards. According to Ryan and Deci (2000:110), a person who derives pleasure from the task itself or experiences a sense of competence or self-determination, is said to be intrinsically motivated. It is the task of principals and school management teams to create an environment where educators get the necessary recognition and experience a positive sense of belonging.

- **Time availability.** A perception that the workload schedules ensure extra time for individuals and groups to pursue innovations, with jobs structured in ways to support such efforts, and achieve short and long-term organisational goals. Research suggests that time availability among managers is an important resource for generating entrepreneurial initiatives. This is a real challenge for the schools participating in the study. They are all successful even though the workload of educators is a constraining factor. The pro-active principal must ensure that there is an even distribution in the workload of educators.
- **Organisational boundaries.** The extent to which one perceives the flexibility of organisational boundaries that is useful in promoting entrepreneurial activity, because they enhance the flow of information between the external environment and the school, as well as between departments within the business. Covin and Slevin (1991:18) note that an 'appropriate' structure for a firm with an entrepreneurial posture, often includes decentralisation of decision-making authority, minimal hierarchical levels or structural layers, free-flowing communication channels, and closely integrated research and development, and manufacturing and marketing functions.

Principals and school management teams should practice the decentralisation of powers, which helps in the reduction of decision-making levels. The

organisational structure should allow for a free-flow of ideas and participation from staff, and thus facilitates the process of employee empowerment.

7.3.2 Action plans

The researcher proposes the following action plans for principals, management staff and school governing bodies, to improve or to establish entrepreneurial orientation as a measure for continuous success and sustainability of schools.

Refer to Table 7.1 on the next page (**Action plans towards the establishment of entrepreneurial orientation in schools**)

Table 7.1: Action plans towards the establishment of entrepreneurial orientation in schools

Objective	Resources	Responsibility	Action	Desired future state
Appointment of school principal.	Appointment criteria based on the principles of entrepreneurial orientation. National and provincial regulations and legislation.	School Governing Body. Provincial education department.	Appointment of a principal that is knowledgeable in the field of entrepreneurship.	Entrepreneurial principal.
Entrepreneurial leadership.	School self- evaluation. Literature on entrepreneurial leadership.	School Governing Body. Principal. All levels of management.	School self-evaluation to determine the current state of leadership at all levels in the school. The setting of high expectations and standards for academic, social, emotional and physical development of learners. Principal and managerial staff support, facilitate and promote entrepreneurial behaviour.	Entrepreneurial leadership contributes to all learners' ability to achieve high standards. The management of school which ensures creative management of the school with equal opportunities for both educators and learners. Principal provides stimulus for change. Policies, programmes and practices reflect transformational change.

Objective	Resources	Responsibility	Action	Desired future state
Strategic intent.	Sound knowledge of entrepreneurial orientation to develop an executable mission and vision. Existing literature on entrepreneurial orientation and the advantages of this strategic posture. Knowledgeable principal.	Principal. School Governing Body. All management staff. Subject groups.	Mobilise staff, parents, learners and the school community around the vision, mission and shared values of the school. Continuous articulation of the new entrepreneurial mission and vision of the school. Promotion of communication between different departments and subjects in a flattened communication structure.	New entrepreneurial school culture which will promote sustainability and a competitive advantage. Continuous and cross functional learning between departments and subjects.
School development programme.	Input from all staff members in a transparent and interactive process. Guidance from principal who is knowledgeable on the entrepreneurial processes. Swot analysis. Current state of affairs at the school.	Principal. Management team All staff members.	The development of an executable improvement plan which include aspects of innovation, autonomy, pro-activeness and competition.	Decision-making authorities use outcome to change and improve the school.

Objective	Resources	Responsibility	Action	Desired future state
Autonomy.	The current undesirable situation of centralised power and responsibility. The articulation of the desired future state of sharing responsibility.	Principal. School Management Team. Current legislation and regulations.	Delegation of duties and responsibilities. Educators rewarded (intrinsically) for creativity. Staff creatively solves problems.	Staff that is empowered to take responsibility, renewed with improved self-esteem and self-worth. Leadership and management development. Performance improvement. Creative staff and problem-solving techniques.
Innovation.	The school's current position in the educational market. Evaluation of the relevancy of the current offerings by the school. Literature on the current needs of learners. Cultivation and consideration of all ideas presented by the staff. Evaluation of the technological needs of the school.	Principal All staff members.	Exploring new services/learning areas/sport codes and processes. Introduction of new technology at the school. Introduction of new learning methods at the school.	Dramatic change in the offerings of the school to stay relevant, sustainable and to get a competitive advantage in the market. Enrolment of new learners due to the change in what the school has to offer. Learners experiencing barriers to learning are effectively acknowledged, addressed and accommodated for expanded opportunities.

Objective	Resources	Responsibility	Action	Desired future state
Pro-activeness.	Education policy, national or provincial. Monitoring of market trends. Knowledge of latest educational practices. School self-evaluation; to determine weaknesses, possible threats and opportunities. Analysis of learners' performance. Analysis of the current socio-economic situation in the community.	Principal. School Governing Body. Staff. Elected School Development Team.	Anticipates change or possible changes in policy to impose action plans. Respond to learners' needs with the introduction of new services, learning areas, sport codes and processes. Immediate academic interventions to support learners who are at risk. Support to all learners that are in physical need, to prevent academic deterioration.	The school has a first-mover advantage in the introduction of new services, learning areas, sport codes and processes. Learners are cared for psychologically, emotionally and physically. Principal is pro-active in dealing with problems and takes firm action. School policies and procedures reflect the promotion of non-sexism, human dignity and respect.

Objective	Resources	Responsibility	Action	Desired future state
Competitive aggressiveness	School self- evaluation, especially on academic performance. Current offering by the school. Current competitive posture. How competitive is the school? Evaluation of the level of competition within the school. Analyses of the relevance of the school in the community.	Principal. School Governing Body. Staff.	Immediate action to be taken on academic performance to support learners at risk. Improve or reduce the number of offerings to keep standards high. Determine the relevance of the current offering of the school. Move to learner-centered school to attract and retain students. Healthy competition between staff members and departments to create a positive learning environment.	New ways to do things and new things to do. High quality valued education. School is relevant in the community. School attracts talented learners and staff.

Objective	Resources	Responsibility	Action	Desired future state
Shared values.	Current set of values of the school. Analysis of the current level of team work at the school. Value of entrepreneurship. Current example of decision-makers.	Principal. School management team. Educators. Support staff.	Re-visiting the current values of the school to determine their relevancy. Development of a new set of shared values. All actions to be directed with the new values as guidelines. Teamwork will be the new value and norm at the school.	School has a new moral and operational compass. Sustained high performance. Staff operates as a high performing team, sharing responsibility. Teamwork contributes to high standards of achievement for all learners.
Experimentation.	Conventional methods and procedures on discipline, teaching methods, assessment and communication.	Principal. School Governing Body. Management team. All staff.	Encouraging and rewarding of experimentation to develop innovative ways to reach school effectiveness and success. Flattening of communication channels.	Entrepreneurial spirit of experimentation to serve the best interest of all learners.

Objective	Resources	Responsibility	Action	Desired future state
Transfer of knowledge.	Current state of working in silos. Current short-comings in the process of knowledge transfer. Current staff development practices. Experience and talent pool of the school.	Principal. Staff Development Team. All staff.	Encouragement of cross functional learning between departments and subjects. Establishment of professional learning groups between different schools, to share knowledge and expertise. Revisiting staff development programmes to ensure that the experience of experienced staff is shared to all staff members.	Free-flow of information and learning within and from outside the school. Empowering of staff. Personal growth opportunities for all staff members.
Supportive learning environment.	Analysis of the current fears and the constraining factors present between the staff. The current unexpressed negative values present between staff members at the school, e.g. critics, freedom of expression.	Principal. All management levels. All staff.	Creating a learning environment that is psychologically safe, where mistakes are allowed, different views are appreciated, open to new ideas.	A learning environment supportive of innovation.
Time availability.	National and provincial regulation and legislation. Analysis of time-tables, extra-curricular involvement and the work distribution of all staff.	Principal. School Management Team.	Addressing the contentious issue of uneven workload distribution at schools.	Even distribution of workload to give every staff member the opportunity to engage in activities in the interest of all learners at the school.

7.4 ACHIEVEMENT OF RESEARCH OBJECTIVES

The success of this research study is dependent on the realisation of the primary and secondary objectives, as set out under Section 1.3 in Chapter 1 of this study.

7.4.1 Primary objectives re-visited

The primary objective of this study is to assess the level in, and impact of entrepreneurial orientation on the perceived success of three selected groups of public secondary schools in Gauteng.

The primary objective was achieved through the identification of dependent and independent variables through the literature research. A quantitative methodology was used, which led to the development of a structured questionnaire. Multiple regressions were performed to determine the relationship between the dependent and independent variables. A Hierarchical Linear Modelling was performed to determine whether there were significant differences between the school groups in terms of selected variables. A Spearman's rho was also performed to determine the correlation between the independent variables and the four main groups of dependent variables. From the results of the empirical study, recommendations could be made on how schools can employ the principles of entrepreneurial orientation to ensure sustainability and a competitive advantage.

7.4.2 Secondary objectives re-visited

The first secondary objective was to obtain insight into entrepreneurship and entrepreneurial orientation by means of a literature study, which was reached in the literature study in Chapter 2.

The second and third secondary objectives, to obtain insight of how public secondary schools operate as entrepreneurial entities, and to obtain insight around school principals acting as entrepreneurs, were reached in Chapter 3.

The literature study in Chapter 3 also provides insight into the current state of education in South Africa, which fulfilled the fourth secondary objective.

Chapter 4 provides insight of the perceived success factors for public schools, by means of a literature study.

The determining and analysis of the relationship between entrepreneurial orientation and the success factors for public secondary schools are to be found in Chapter 6. Section 6.6 of the chapter provides the factor analyses; Section 6.7 provides the measures and results for the reliability and validity of the measuring instrument. The results of the multiple regression analyses, to determine the relationship between the dependent and independent variables are presented in Section 6.8.

The results of the Spearman's rho, to determine the correlation between the independent variables and the four broad factors of independent variables, are presented in Section 6.10.

In Chapter 6 a Hierarchical Linear Modelling was performed to determine whether there were significant differences between the school groups in terms of selected variables. The analyses are presented in Section 6.9 of the chapter.

Recommendations on how to enhance and foster an intrapreneurial climate and culture within public secondary schools are to be found in Chapter 7.

7.5 SUGGESTIONS FOR FURTHER RESEARCH

Through this research, independent variables were identified and a measure for perceived school success as the dependent variable was identified. Independent variables were **autonomy**, **innovativeness**, **risk-taking**, **pro-activeness** and **competitive aggressiveness**. Perceived school success was measured through **school leadership** (leadership, evaluating school performance, and staff development), **teaching and learning** (emphasis on academics, class size and high quality of teaching and learning), **learner behaviour** (safe and orderly schools, discipline and parental involvement) and **learners** (learner self-esteem, monitoring pupil performance, feedback and high expectations). The impact of each of the independent variables on the dependent variable was determined and recommendations made with regard to focus areas that might enhance the chances of individual schools. The primary unit of measurement was the successful schools in the three different groups. For this reason, the variance between the different groups was also analysed.

It is also suggested that the research be expanded to other high-performing schools in the private and public sectors. The entrepreneurial orientation of struggling schools should be investigated as well. The proposed studies can provide useful information for conducting comparative studies that could lead to a better understanding of the role that entrepreneurship plays in school success. This study could be coupled with the effects of entrepreneurial orientation on teacher commitment.

Research on entrepreneurial orientation, with specific reference to appointment criteria for school principals, can deliver ground-breaking results. The development of such an instrument can guide education departments and School Governing Bodies to recommend and appoint school principals that can lead, - not just manage, - schools to great success for the benefit of each learner in South Africa, or even around the globe.

7.6 SUMMARY

According to Yemini *et al.* (2015: 527), traditionally, entrepreneurship was associated with the private sector and for-profit business businesses, with entrepreneurial innovations considered to be those directed toward the marketplace.

Schools are frequently considered to be resistant to educational change; expressed in their reliance on institutional regulations and norms, which leave little room for entrepreneurship (Levin, 2006). Since education is generally a non-profit field, education researchers have applied different approaches to entrepreneurship than those working in for-profit settings (Borasi & Finnigan, 2010; Ruvio *et al.*, 2010). Indeed, school entrepreneurship falls under the term 'corporate (organisational) entrepreneurship': an institution's tendency to initiate and implement both incremental and radical innovations in its internal and external environments (Eyal, 2007).

The study has indicated that there is a positive relationship between the dimensions of entrepreneurial orientation and some of the success factors of the public secondary schools. The challenge for South African schools is to establish a spirit of entrepreneurship to be successful. To continuously change and to maintain a competitive advantage, a sustainable entrepreneurial strategy is necessary. An entrepreneurial orientation may be cultivated within the different departments at the school, by building entrepreneurial competencies into the development plans of the school. Entrepreneurship is a continuous process and must form part of the shared values of the school.

It is the responsibility of principals and school management teams to unlock the potential of educators. They must create entrepreneurial work methods and cherish entrepreneurial staff members, but are also responsible to create a climate where the full potential of these staff members can be realised.

Corporate entrepreneurship is a source for a competitive advantage, not only for businesses, but most certainly also for public schools. There are no alternatives: be intrapreneurial or fall into the in danger to cease to exist or to muddle through in a spirit of mediocrity.

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APPENDIX A

**AN ASSESSMENT OF THE IMPACT
OF ENTREPRENEURIAL
ORIENTATION ON THE SUCCESS OF
SELECTED PUBLIC
SECONDARYSCHOOLS**

Confidential

Note: All answers are confidential and no individual or school will be identified or implied

Dear respondent

Thank you for your time and participation in this survey.

Your school has been identified as an institution which cultivates academic excellence. Your part in the success can never be underestimated – congratulations!

An independent investigation by the South African Social Investment Exchange (2011:1) indicates that education in South Africa does not only compare with that of the poorest in the world, but also with that of the poorest in Africa. The poor performance of the South African education system takes place despite a richness of resources in Africa's most industrialised country. The under-performance of South African pupils is, therefore, a great source for concern and the reasons for this should therefore be investigated in order to perform the necessary interventions to prevent this situation from continuing. A further source of concern is that there is a large gap between a small minority of schools that still perform well and the overwhelming majority that is truly in trouble. The dark reality is that 60 to 80% of South African public schools can be considered dysfunctional.

The worth of any school system lies in its ability to consciously achieve the purpose for which it was established. Such an educational system is also expected to adequately serve its customers (students, parents, employers of labour and society). Teachers are the direct vehicles through which the educational objectives are transmitted to the students. The principals, on the other hand, are vested with the responsibility of managing both the teachers and students for the achievement of the educational objectives of the nation. To tackle the issue of poor quality in the South African school system, there are pertinent questions that should be raised, such as: How innovative are the school principals in carrying out their management tasks? How do they ensure that the teachers under their leadership initiate innovations in their teaching methods to enhance quality? To what extent does government allow principals and teachers to initiate innovations?

Entrepreneurship within the organisation may enable future success and competitiveness and researchers now recognize corporate entrepreneurship, and an entrepreneurial orientation as a critical factor in the success of organisations.

This survey aims to measure the entrepreneurial orientation within schools, as well as the success factors currently prevailing in schools. Your honest opinion regarding the various statements is valued.

The survey is divided in three sections:

Section A is the Entrepreneurial Orientation questionnaire

Section B measures the Success Factors currently prevalent in schools

Section C consists of Biographical information

SECTION A: ENTREPRENEURIAL ORIENTATION

The purpose of this section of the questionnaire is to determine the entrepreneurial orientation within the management of the school. Please read every statement carefully and make a personal decision. Please answer all the questions to ensure the validity and reliability of the study.

This section consists of 27 questions. Please indicate which statement best describes your opinion by selecting that alternative.

1 Totally DISAGREE	2 DISAGREE	3 UNCERTAIN	4 AGREE	5 Strongly AGREE

AUTONOMY						
A1	I have enough autonomy in my job without continual supervision to do my work.	1	2	3	4	5
A2	Our school allows me to be creative and try different methods to do my job.	1	2	3	4	5
A3	Educators at our school are allowed to make decisions without going through elaborate justification and approval procedures.	1	2	3	4	5
A4	Educators at our school are encouraged to manage their own work and have flexibility to resolve problems.	1	2	3	4	5
A5	I seldom have to follow the same work methods or steps while performing my major tasks from day to day.	1	2	3	4	5
INNOVATIVENESS						
I1	Our school regularly introduces new services/learning areas/sport codes//processes.	1	2	3	4	5
I2	Our school places a strong emphasis on new and innovative services/learning areas/sport codes//processes.	1	2	3	4	5
I3	Our business has increased the number of services/learning areas/sport codes/processes offered during the past two years.	1	2	3	4	5
I4	Our school is continually pursuing new opportunities.	1	2	3	4	5
I5	Over the past few years, changes in our services/learning areas/sport codes//processeshave been quite dramatic.	1	2	3	4	5
I6	In our school there is a strong relationship between the number of new ideas generated and the number of new ideas successfully implemented.	1	2	3	4	5

I7	Our school places a strong emphasis on continuous improvement in services/learning areas/sport codes//processes.	1	2	3	4	5
I8	Our school has a widely held belief that innovation is an absolute necessity for the schools' future.	1	2	3	4	5
I9	Our leaders seek to maximise value from opportunities without constraint to existing models, structures or resources.	1	2	3	4	5

RISK TAKING						
R1	When confronted with uncertain decisions, our school typically adopts a bold posture in order to maximise the probability of exploiting opportunities.	1	2	3	4	5
R2	In general, our school has a strong inclination towards high-risk projects.	1	2	3	4	5
R3	Owing to the environment, our school believes that bold, wide-ranging acts are necessary to achieve the schools' objectives.	1	2	3	4	5
R4	Educators are often encouraged to take calculated risks concerning new ideas.	1	2	3	4	5
R5	The term 'risk-taker' is considered a positive attribute for educators and management team in our school.	1	2	3	4	5
PRO-ACTIVENESS						
P1	Our school is very often the first to introduce new services/ learning areas/ sport codes/processes.	1	2	3	4	5
P2	Our school typically initiates actions that competitors respond to.	1	2	3	4	5
P3	Our school continuously seeks out new services/learning areas/sport codes/processes.	1	2	3	4	5
P4	Our school continuously monitors market trends and identifies future needs of learners.	1	2	3	4	5
COMPETITIVE AGGRESSIVENESS						
C1	In dealing with competitors our school typically adopts a very competitive "undo-the-competitor" posture.	1	2	3	4	5
C2	Our school is very aggressive and intensely competitive.	1	2	3	4	5
C3	Our school effectively assumes an aggressive posture to combat industry trends that may threaten our survival or competition position.	1	2	3	4	5
C4	Our school knows when it is in danger of acting overly aggressive (this could lead to erosion of our school's reputation or to retaliation by competitors).	1	2	3	4	5

SECTION B: SUCCESS FACTORS

The purpose of this section of the questionnaire is to determine what the respondents view as the most important success factors in the school. Please read every statement carefully and make a personal decision. Please answer all the questions to ensure the validity and reliability of the study.

SECTION B-1: SCHOOL LEADERSHIP

This section consists of 22 questions. Please indicate which statement best describes your opinion by selecting that alternative.

1 Totally DISAGREE	2 DISAGREE	3 UNCERTAIN	4 AGREE	5 Strongly AGREE

LEADERSHIP						
B1-1	The Principal is the instructional leader of the school (ensure that every learner receives the highest quality instruction every day).	1	2	3	4	5
B1-2	The Principal is involved in every aspect of the school.	1	2	3	4	5
B1-3	The Leadership can be described as achievement-orientated leadership.	1	2	3	4	5
B1-4	The Principal set high expectations and standards for academic, social, emotional and physical development of learners.	1	2	3	4	5
B1-5	Principal mobilise staff, parents, students and community around the vision, mission and shared values of the school.	1	2	3	4	5
B1-6	The staff is considered as the most important resource.	1	2	3	4	5
B1-7	Principal and SMT have good communication skills.	1	2	3	4	5
B1-8	Principal is proactive to grasp or to create opportunities.	1	2	3	4	5
B1-9	Principal is a risk-taker to best serve the staff, learners and school.	1	2	3	4	5
B1-10	Principal is a leader of change and provide stimulus for change. Encourage experimentation and innovation.	1	2	3	4	5
B1-11	Effective leadership at our school contributes directly to the success of our school.	1	2	3	4	5
EVALUATING SCHOOL PERFORMANCE						
B7-1	Whole School Evaluation (WSE) and School Self Evaluation (SSE) are imperative for school effectiveness and school change.	1	2	3	4	5

B7-2	WSE & SSE are executed in accordance to prescribed regulations.	1	2	3	4	5
B7-3	WSE & SSE are transparent and interactive.	1	2	3	4	5
B7-4	Decision-making authorities at the school make use the outcomes to improve the school. The effort is worth the while.	1	2	3	4	5
STAFF DEVELOPMENT						
B3-1	Principal is committed in identifying professional development needs.	1	2	3	4	5
B3-2	Development programmes/initiatives are designed to fit our school context.	1	2	3	4	5
B3-3	Programmes presented increase the cognitive and technical skills of staff.	1	2	3	4	5
B3-4	Staff development has a direct impact on teaching methods.	1	2	3	4	5
B3-5	Staff is committed to the Continuous Professional Teacher Development programme of the Department of Basic Education.	1	2	3	4	5
B3-6	Staff development programmes/initiatives contribute directly to learner achievement.	1	2	3	4	5
B3-7	Staff development programmes are based on the outcomes of Whole School Evaluation.	1	2	3	4	5

SECTION B-2: TEACHING AND LEARNING

This section consists of 18 questions. Please indicate which statement best describes your opinion by selecting that alternative.

1 Totally DISAGREE	2 DISAGREE	3 UNCERTAIN	4 AGREE	5 Strongly AGREE

EMPHASIS ON ACADEMICS						
B4-1	The emphasis of our school is on academics.	1	2	3	4	5
B4-2	The staff set high, but achievable, academic goals for learners.	1	2	3	4	5
B4-3	Learners attend our school because of the academic emphasis.	1	2	3	4	5
B4-4	Socio-economic factors and minority groups have an influence on the setting of academic goals.	1	2	3	4	5
B4-5	The Principal plays an active role by setting high academic expectations.	1	2	3	4	5
B4-6	The emphasis on academics creates high expectations for all	1	2	3	4	5

	school participants.					
B4-7	Our academic results can be attributed to the emphasis on academics.	1	2	3	4	5
CLASS SIZE						
B13-1	Class size affects school effectiveness.	1	2	3	4	5
B13-2	Smaller classes may contribute to better discipline and learner achievement.	1	2	3	4	5
HIGH QUALITY OF TEACHING AND LEARNING						
B2-1	Principal oversees the curriculum.	1	2	3	4	5
B2-2	Principal monitors work of management staff.	1	2	3	4	5
B2-3	Principal sets framework for curriculum planning and ensure curriculum delivery is successful.	1	2	3	4	5
B2-4	High quality of Teaching and Learning is enshrined in the vision and mission of the school.	1	2	3	4	5
B2-5	School recognises effective learning and teaching and good practice.	1	2	3	4	5
B2-6	All learners, irrespective of social background, race, gender, have the same potential.	1	2	3	4	5
B2-7	In the event of poor achievement, staff plays the <i>blame game</i> .	1	2	3	4	5
B2-8	The quality of teaching and learning contribute directly towards our academic successes.	1	2	3	4	5
B2-9	The administrative load (other issues) of the Principal is too big to oversee the Teaching and Learning programme.	1	2	3	4	5

SECTION B-3: LEARNER BEHAVIOUR

This section consists of 21 questions. Please indicate which statement best describes your opinion by selecting that alternative.

1 Totally DISAGREE	2 DISAGREE	3 UNCERTAIN	4 AGREE	5 Strongly AGREE

SAFE AND ORDERLY SCHOOLS						
B11-1	Effective teaching and learning can take place only in a safe and secure school environment.	1	2	3	4	5
B11-2	Psychically safe: Our facilities are well-maintained and the school is managed towards an orderly organisation.	1	2	3	4	5
B11-3	Psychological safe: No fear of ridicule, intimidation, harassment, humiliation, bullying and violence.	1	2	3	4	5
B11-4	Intellectually safe: learners can think, doubt, question and make mistakes.	1	2	3	4	5
B11-5	Our school is characterised by professional educator conduct.	1	2	3	4	5
B11-6	Our school is characterised by good management and governance.	1	2	3	4	5
DISCIPLINE						
B8-1	Discipline underpins successful learning and teaching.	1	2	3	4	5
B8-2	Positive discipline has a positive impact on our school culture.	1	2	3	4	5
B8-3	Harsh and punitive disciplinary measures lead to reduced safety, connectedness and feelings of belonging.	1	2	3	4	5
B8-4	Disruptive behaviour affects learners' safety, readiness to learn and future behavior.	1	2	3	4	5
B8-5	The disciplinary system at our school is clear, consistent and equitable applied to every learner.	1	2	3	4	5
B8-6	The behaviour and conduct of learners at our school impact negatively on learners' achievement.	1	2	3	4	5
B8-7	I consider alternative employment due to the conduct and behavior of learners.	1	2	3	4	5
PARENTAL INVOLVEMENT						
B5-1	Parental Involvement is an important aspect of school effectiveness.	1	2	3	4	5
B5-2	Parental Involvement contributes to the success of our school.	1	2	3	4	5

B5-3	Parents at our school are academically involved.	1	2	3	4	5
B5-4	Positive relations with parents with good communication.	1	2	3	4	5
B5-5	Parents support the vision and mission of the school, including the Code of Conduct.	1	2	3	4	5
B5-6	Parental involvement has lead to increase in academic achievement with a lower drop-out and retention rate.	1	2	3	4	5
B5-7	Parental involvement has a positive behavioral outcome.	1	2	3	4	5
B5-8	Parental involvement contributes positively towards a decrease in learner absentees.	1	2	3	4	5

SECTION B-4: LEARNERS

This section consists of 19 questions. Please indicate which statement best describes you opinion by selecting that alternative.

1 Totally DISAGREE	2 DISAGREE	3 UNCERTAIN	4 AGREE	5 Strongly AGREE

LEARNER SELF-ESTEEM						
B12-1	Learners with high self-esteem set higher aspirations, thus it could be associated with high academic achievement.	1	2	3	4	5
B12-2	High self-esteem fosters the confidence to engage in difficult problem-solving.	1	2	3	4	5
B12-3	Positive social connections decrease risk behavior.	1	2	3	4	5
B12-4	The Principal is responsible for the development of a positive school climate.	1	2	3	4	5
B12-5	Academic achievement and success lead to high self-esteem.	1	2	3	4	5
MONITORING PUPIL PERFORMANCE						
B6-1	The monitoring of learner progress is critical for school effectiveness.	1	2	3	4	5
B6-2	Monitoring is used to identify learners at risk of failure.	1	2	3	4	5
B6-3	Monitoring is used for accountable and responsible feedback to parents.	1	2	3	4	5
B6-4	Monitoring is used to make certain adaption to the instructional methods.	1	2	3	4	5
B6-5	Monitoring is used to identify specific skill deficits.	1	2	3	4	5

B6-6	The managerial staff of the school monitor teaching and learning by classroom visits.	1	2	3	4	5
FEEDBACK (Praise & Reprimand)						
B9-1	Feedback to learners is imperative for school effectiveness.	1	2	3	4	5
B9-2	Positive feedback forms part of my daily conduct in class.	1	2	3	4	5
B9-3	Positive feedback creates a positive learning environment.	1	2	3	4	5
HIGH EXPECTATIONS						
B10-1	The setting of high expectations for learners is imperative for an effective school.	1	2	3	4	5
B10-2	Teacher perceptions of learners can influence learner performance.	1	2	3	4	5
B10-3	I have the same set of high expectations for learners from low-income families.	1	2	3	4	5
B10-4	I articulate my high expectations very clearly to learners.	1	2	3	4	5
B10-5	The Principal is committed to work with the staff to reach the expectations set for the learners.	1	2	3	4	5

SECTION C: BIOGRAPHICAL INFORMATION

The following information is required to assist with the statistical analysis of data for comparison among different interest groups. Responses will be treated confidentially. Your assistance in providing this important information will be highly appreciated.

Mark the appropriate response with an X

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

C02	Indicate you gender	Male	Female

C03	Indicate your race	Black	White	Indian	Coloured

C04	Indicate your grading within the school				
	Educator				
	Head of Department				
	Deputy Principal				
	Principal				

C05	Indicate your highest academic qualification	
Grade 12		
Certificate		
Diploma		
Degree		
Degree + Diploma/Certificate		
Honours degree		
Masters degree		
PhD		

**THANK YOU FOR YOUR TIME IN COMPLETING THIS
SURVEY**

APPENDIX B

ENTREPRENEURIAL DIMENSIONS: INDEPENDENT VARIABLES

Factor 1: AUTONOMY	
A2	Our school allows me to be creative and try different methods to do my job (Auto 2).
A3	Educators at our school are allowed to make decisions without going through elaborate justification and approval procedures (Auto 3).
A4	Educators at our school are encouraged to manage their own work and have flexibility to resolve problems (Auto 4).
A1	I have enough autonomy in my job without continual supervision to do my work (Auto 1).
A5	I seldom have to follow the same work methods or steps while performing my major tasks from day to day (Auto 5).
Factor 2: INNOVATIVENESS	
I2	Our school places a strong emphasis on new and innovative services/learning areas/sport codes//processes (Inno 2).
I4	Our school is continually pursuing new opportunities (Inno 4).
I3	Our business has increased the number of services/learning areas/sport codes/processes offered during the past two years (Inno 3).
I1	Our school regularly introduces new services/learning areas/ sport codes//processes (Inno 1).
I5	Over the past few years, changes in our services/learning areas/ sport codes//processes have been quite dramatic (Inno 5).
I6	In our school there is a strong relationship between the number of new ideas

	generated and the number of new ideas successfully implemented (Inno 6).
I8	Our school has a widely held belief that innovation is an absolute necessity for the schools' future (Inno 8).
I9	Our leaders seek to maximise value from opportunities without constraint to existing models, structures or resources (Inno 9).
Factor 3: PRO-ACTIVENESS	
P2	Our school typically initiates actions that competitors respond to (Proac 2).
P1	Our school is very often the first to introduce new services/ learning areas/ sport codes/processes (Proac 1).
P3	Our school continuously seeks out new services/learning areas/sport codes/processes (Proac 3).
Factor 4: COMPETITIVE AGGRESSIVENESS	
C2	Our school is very aggressive and intensely competitive (Comp 2).
C3	Our school effectively assumes an aggressive posture to combat industry trends that may threaten our survival or competition position (Comp 3).
C1	In dealing with competitors our school typically adopts a very competitive "undo-the-competitor" posture (Comp 1).
C4	Our school knows when it is in danger of acting overly aggressive (this could lead to erosion of our school's reputation or to retaliation by competitors (Comp 4).

SCHOOL SUCCESS FACTORS: DEPENDENT VARIABLES

SCHOOL LEADERSHIP	
Factor 1: LEADERSHIP	
B1-2	The Principal is involved in every aspect of the school (Lead 2).
B1-8	Principal is proactive to grasp or to create opportunities (Lead 8).
B1-11	Effective leadership at our school contributes directly to the success of our school (Lead 11).
B1-3	The Leadership can be described as achievement-orientated leadership (Lead 3).
B1-5	Principal mobilise staff, parents, students and community around the vision, mission and shared values of the school (Lead 5).
B1-9	Principal is a risk-taker to best serve the staff, learners and school (Lead 9).
B1-4	The Principal set high expectations and standards for academic, social, emotional and physical development of learners (Lead 4).
B1-1	The Principal is the instructional leader of the school (ensure that every learner receives the highest quality instruction every day (Lead1).
B1-10	Principal is a leader of change and provide stimulus for change. Encourage experimentation and innovation (Lead 10).
B1-6	The staff is considered as the most important resource (Lead 6).
B1-7	Principal and SMT have good communication skills (Lead 7).
Factor 2: EVALUATING SCHOOL PERFORMANCE	
B7-3	WSE & SSE are transparent and interactive (Eva 3).
B7-2	WSE & SSE are executed in accordance to prescribed regulations (Eva 2).

B7-1	Whole School Evaluation (WSE) and School Self Evaluation (SSE) are imperative for school effectiveness and school change (Eva 1).
B7-4	Decision-making authorities at the school make use the outcomes to improve the school. The effort is worth the while (Eva 4).
Factor 3 STAFF DEVELOPMENT	
B3-4	Staff development has a direct impact on teaching methods (Staff 4).
B3-3	Programmes presented increase the cognitive and technical skills of staff (Staff 3).
B3-6	Staff development programmes/initiatives contribute directly to learner achievement (Staff 6).
B3-7	Staff development programmes are based on the outcomes of Whole School Evaluation (Staff 7).
B3-5	Staff is committed to the Continuous Professional Teacher Development programme of the Department of Basic Education (Staff 5).
B-2	Development programmes/initiatives are designed to fit our school context (Staff 2).
B-1	Principal is committed in identifying professional development needs (Staff 1).

TEACHING AND LEARNING	
Factor 1: EMPHASIS ON ACADEMICS	
B4-7	Our academic results can be attributed to the emphasis on academics (Acad 7).
B4-3	Learners attend our school because of the academic emphasis (Acad 3).
B4-6	The emphasis on academics creates high expectations for all school participants (Acad 6).

B4-1	The emphasis of our school is on academics (Acad 1).
B4-5	The Principal plays an active role by setting high academic expectations (Acad 5).
B4-2	The staff set high, but achievable, academic goals for learners (Acad 2).
Factor 2: CLASS SIZE	
B13-2	Smaller classes may contribute to better discipline and learner achievement (Clssiz 2).
B13-1	Class size affects school effectiveness (Clssiz 1).
Factor 3 HIGH QUALITY OF TEACHING AND LEARNING	
B2-2	Principal monitors work of management staff (Qual 2).
B2-3	Principal sets framework for curriculum planning and ensure curriculum delivery is successful (Qual 3).
B2-1	Principal oversees the curriculum (Qual 1).
B2-4	High quality of Teaching and Learning is enshrined in the vision and mission of the school (Qual 4).
B2-5	School recognises effective learning and teaching and good practice (Qual 5).

LEARNER BEHAVIOUR	
Factor 1: SAFE SCHOOLS	
B11-6	Our school is characterised by good management and governance (Safe 6).
B11-5	Our school is characterised by professional educator conduct (Safe 5).
B11-2	Psychically safe: Our facilities are well-maintained and the school is managed towards an orderly organization (Safe 2).
B11-4	Intellectually safe: learners can think, doubt, question and make mistakes (Safe 4).

B11-3	Psychological safe: No fear of ridicule, intimidation, harassment, humiliation, bullying and violence (Safe 3).
B11-5	The disciplinary system at our school is clear, consistent and equitable applied to every learner (Disc 5).
Factor 2: DISCIPLINE	
B8-1	Discipline underpins successful learning and teaching (Disc 1).
B5-1	Parental Involvement is an important aspect of school effectiveness (Paren 1).
B8-4	Disruptive behaviour affects learners' safety, readiness to learn and future behavior (Disc 4).
B11-1	Effective teaching and learning can take place only in a safe and secure school environment (Safe 1).
B8-2	Positive discipline has a positive impact on our school culture (Disc 2).
Factor 3: PARENTAL INVOLVEMENT	
B5-6	Parental involvement has led to an increase in academic achievement with a lower drop-out and retention rate (Paren 6).
B5-3	Parents at our school are academically involved (Paren 3).
B5-7	Parental involvement has a positive behavioral outcome (Paren 7).
B5-8	Parental involvement contributes positively towards a decrease in learner absentees (Paren 8).
B5-5	Parents support the vision and mission of the school, including the Code of Conduct (Paren 5).
B5-2	Parental Involvement contributes to the success of our school (Paren 2).
B5-4	Positive relations with parents with good communication (Paren 4).

LEARNERS	
Factor 1: LEARNER SELF-ESTEEM	
B12-2	High self-esteem fosters the confidence to engage in difficult problem-solving (Lnrself 2).
B12-1	Learners with high self-esteem set higher aspirations, thus it could be associated with high academic achievement (Lnrself 1).
B12-3	Positive social connections decrease risk behaviour (Lnrself 3).
B12-5	Academic achievement and success lead to high self-esteem (Lnrself 5).
B12-4	The Principal is responsible for the development of a positive school climate (Lnrself 4).
Factor 2: MONITORING PUPIL PERFORMANCE	
B6-4	Monitoring is used to make certain adaption to the instructional methods (Moni 4).
B6-3	Monitoring is used for accountable and responsible feedback to parents (Moni 3).
B6-5	Monitoring is used to identify specific skill deficits (Moni 5).
B6-2	Monitoring is used to identify learners at risk of failure (Moni 2).
B6-1	The monitoring of learner progress is critical for school effectiveness (Moni 1).
B6-6	The managerial staff of the school monitor teaching and learning by classroom visits (Moni 6).
Factor 3: FEEDBACK	
B9-3	Positive feedback creates a positive learning environment (Feed 3).
B9-2	Positive feedback forms part of my daily conduct in class (Feed 2).
B9-1	Feedback to learners is imperative for school effectiveness (Feed 1).

Factor 4: HIGH EXPECTATIONS	
B10-4	I articulate my high expectations very clearly to learners (High 4).
B10-3	I have the same set of high expectations for learners from low-income families (High 3).
B10-2	Teacher perceptions of learners can influence learner performance (High 2).
B10-1	The setting of high expectations for learners is imperative for an effective school (High 1).