

**CRITICAL SUCCESS FACTORS IN KENYA CERTIFICATE OF SECONDARY  
EDUCATION EXAMINATIONS IN PUBLIC SECONDARY SCHOOLS IN KIAMBAA  
DIVISION**

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**A Management Research Project Submitted in Partial Fulfillment of the Requirement for  
the Award of Master of Business Administration Degree, School of Business,  
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**DECLARATION**

This research project is my original work that has not been presented to any other university or institution of higher learning for examination.

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This research project has been submitted for examination with my approval as the university supervisor.

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## **DEDICATION**

This work is dedicated to the three people who have been the wind beneath my wings: my parents Ayub Mugo Waitara and the late Winifred Wangui Waitara and Peter Icharia Njenga my greatest supporter, life time friend and companion. You have always inspired me and urged me to soldier onwards courageously. My love now and always to you all!

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## ABSTRACT

Few studies in Kenya have examined the identification and application of critical success factors (CSFs) to various areas of operation in Kenya. The primary purpose of this study was to determine the critical success factors that count for good performance in KCSE by public secondary schools in Kiambaa division. A secondary purpose was to determine whether public secondary schools in Kiambaa division based their success strategies on the critical success factors. The study was informed by the theory on the CSFs approach to management as well as the many studies that have been conducted to determine the major school related factors that influence learner achievement.

Data was obtained by means of a census survey. The respondents were principals, deputy principals and heads of departments in all the 19 public schools in Kiambaa Division. Self administered questionnaires were circulated to all the selected respondents and the response rate was 79% (120/152). To answer the research questions, the data was analyzed using descriptive statistics i.e. measures of central tendency and measures of dispersion.

The study found that there were eight critical success factors that count for good performance in Kenya Certificate of Secondary Education examinations in public secondary schools in Kiambaa division. These were high standards of discipline by students; commitment and dedication to the job; proper time management in school; collaborative and supportive leadership style; high standards of discipline by staff; text books; training students on study skills; laboratory equipment and chemicals. The study also found that the success strategies given high priority in schools were only somewhat based on the critical success factors. Critical success factor areas were not adequately addressed because schools primarily focused on four of these CSFs i.e. provision of adequate text books, high standards of discipline by students, provision of laboratory chemicals and equipment and high standards of discipline by staff . Schools did not pay exceptionally high and continuous attention to proper time management, collaborative and supportive leadership and training students on study skills.

Recommendations for practice include suggestions that education policy makers review their policies on education management to ensure that they reflect the Critical Success Factors, ensure

explicit communication of these factors to all appropriate levels of management in a structured manner and design mechanisms to monitor and evaluate how adequately these CSF areas are being addressed in schools. Student discipline being most critical to success should be given very serious and continuous attention by schools administrators who should come up with creative approaches to create or enhance a school culture that embraces self- discipline at its core. School administrators should re-evaluating their strategic priorities and agenda in light of the findings on CSFs and where necessary, rework their strategic plans accordingly.

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## LIST OF ABBREVIATIONS

- i. ASESP- After School Education and Support Programme
- ii. BOG- Board of Governors
- iii. CPI- Critical Performance Indicators
- iv. CPM- Critical Performance Measures
- v. DEO- District Education Officer
- vi. DFEE- Department for Education and Employment
- vii. ERP- Enterprise Resource Planning
- viii. KCPE- Kenya Certificate of Primary Education
- ix. KCSE- Kenya Certificate of Secondary Education
- x. KNEC- Kenya National Examination Council
- xi. MOEST- Ministry of Education Science and Technology
- xii. PTA- Parents Teachers Association
- xiii. SACMEQ- Southern and Eastern Africa Consortium for Monitoring Education Quality
- xiv. SMASSE- Strengthening Mathematics and Science Education
- xv. UNICEF- United Nations Children's Fund

## **CHAPTER ONE: INTRODUCTION**

### **1.1 Background of the Study**

Public sector reforms around the world have been necessitated by an increasing need for efficiency, effectiveness, economy, performance evaluation, ethics, environment and market concerns (Rose and Lawton, 1999). Public sector reforms in the United Kingdom have been driven by rising demand for and expectations of services from the general public, a government nervous of the level of public expenditure and development of superior ways of managing the private sector (Flynn, 1997). At the turn of the millennium, the Government of Kenya formulated, documented and launched a strategy for performance improvement in the public service. This was in response to the forces outlined above as well as the new and emergent realities associated with the information age. As per the guidelines of this strategy, the management of public sector organizations experienced a shift from traditional inward looking, bureaucratic systems, processes and attitudes to modern management systems. All government ministries and departments were required to embrace a number of performance improvement programmes. This was the genesis of a management approach in government that comprehensively implements all aspects of strategic management.

In the basic education sub- sector, strategic planning and other strategic management practices began to be adopted and institutionalized by the Ministry Of Education, the Teachers Service Commission (TSC), public primary and secondary schools. Entrenching strategic management in basic education management in Kenya was envisioned as the best way to replace the existing culture of underperformance in schools emanating from routine performance of duties where results were not predetermined with a new results oriented performance culture. This new culture was considered as an effective vehicle which would ensure improved service delivery and lead to enhanced performance as all levels. Actors were required to specify the results they seek to realize within a given time frame and strategies for attaining them (Teachers Image, 2006). Despite these performance improvement measures in the basic education sub-sector, poor academic performance has continued to be one of the major challenges facing managers of educational institutions and the basic education sub-sector as a whole.

Poor academic performance is mirrored in the poor performance of most schools in the Kenya Certificate of Secondary Education (KCSE) examinations. An analysis of the 2008 KCSE examination results in Kiambaa division shows that they are fairly skewed to the left. Nineteen percent of the twenty one schools in the division posted impressive mean scores of between C+ and B+ while sixty two percent of the schools attained below average mean scores ranging between D<sup>+</sup> and D<sup>-</sup>. Forty six percent of the students performed very poorly scoring below average grades ranging from D<sup>+</sup> to E grades with a wastage rate of thirty four percent. These students registered grades that were too low to allow them to transition into tertiary education institutions. Out of the thirty percent who scored grades that would allow them direct admission into the university, only ten percent scored top grades (A, A<sup>-</sup> and B<sup>+</sup>) that assured them transition into the government universities as the grades had earned them government sponsorships. For the other twenty percent, chances of accessing university education were highly subject to availability of funds to pay for the relatively expensive university courses. Thirty two percent of the students scored average grades that would allow them access into middle level colleges again subject to the availability of funds. An analysis of year 2007 KCSE results reveals an even grimmer picture as only eight percent of the students scored quality grades (A, A<sup>-</sup> and B<sup>+</sup>) that assure transition while sixty seven percent underperformed and scored below average grades (ranging from D<sup>+</sup> to E) despite the wastage rate being slightly lower than that of year 2008 at twenty eight percent. Of great concern is the underperforming bracket whose poor grades continue to curtail their chances of joining tertiary institutions thus limiting their chances of employment and participation in national development. Besides undermining their chances of social economic advancement, it also undermines Kenya's chances of achieving "Vision 2030".

It is because of the reasons highlighted above that secondary schools have continued instituting many and varied performance improvement measures all aimed at achieving improved performance in KCSE examinations. While designing and implementing these measures, it becomes imperative that due consideration and priority be given to those handful of things that must go right in a school for good performance in KCSE

examinations to become a reality. These are the critical success factors that determine good performance in KCSE examinations. It is my view in this research that the one sure way of adequately addressing the continuous challenge of poor academic performance in schools is ensuring that the KCSE performance improvement measures adopted spring from and revolve around the critical success factors. It is only when education managers in secondary schools constantly keep an eye on these critical success factors to ensure that they are running as they should, that the envisioned good performance becomes achievable.

### **1.1.1 Critical Success Factors (CSFs)**

The gist of the CSF approach is that in any organization certain factors will be critical to its success and if objectives associated with the factors are not achieved, the organization will fail and perhaps catastrophically. The idea of identifying critical success factors as a basis for determining the information needs of managers was originally proposed by Daniel (1961) but popularized by Rockart (1979) who was the first to define the concept as a limited number of areas in which results, if satisfactory will enable successful competitive performance. Bullen and Rockart (1981), argue that if results in CSFs are not adequate, the organizations efforts for the period will be less than defined. These CSFs are not viewed as an end in and of themselves but rather a means to an end (Robson, 1997). This implies that CSFs are not business objectives or goals. They are a combination of activities and processes designed to support the achievement of such desired outcomes as specified by the firm's objectives or goals.

The concept of CSFs can be traced back to the late 1950s and early 1960s in the information systems field. Its application spread from this field to strategic and operational planning and then to core competency, value chain and business process perspectives (Brotherton and Shaw, 1996). The CSFs were initially devised as a tool for determining the information needs of top managers (Rockart, 1979). Determining information needs began with identifying what organizations must do well in order to succeed i.e. CSFs. Once CSFs are identified, top managers are able to zero in on the critical decisions that need to be made in line with the CSFs and consequently, clearly

identify the information required to support those decisions. Successful strategy development and implementation rely on the quality of available information (Jenster, 1987). Information in this case is seen as a resource which can make or break a firms' chance of success. As CSFs determine these information needs, they become the background against which strategies are formulated in order to achieve organizational goals.

Boyton and Zmud (1984) acknowledged the CSF approach as one that was useful to the planning process, management information system and requirements analysis. They contend that since CSFs are typically twenty percent of the total factors that determine eighty percent of the business unit's performance, they need special and continuous attention to ensure operational, managerial and organizational success denoted by high performance. Brotherton and Shaw (1996) observe that CSFs are actionable to a variable extent, controllable by management and potentially measurable. This implies that the usefulness of CSFs lies in their simplicity to understand, document and monitor.

### **1.1.2 Secondary Schools in Kiambaa Division, Kiambu East District**

Year 2009 statistics from the Kiambu District Education Officer's (DEO's) office show that currently there are a total of 21 secondary schools. 19 are public schools and 2 are privately owned and managed.

**Table 1.1: Public Secondary Schools in Kiambaa Division**

<b>Geographical Zone</b>	<b>Number of Boys Schools</b>	<b>Number of Girls Schools</b>	<b>Number of Mixed Schools</b>	<b>Total Number of Schools</b>
<b>Kihara</b>	0	2	4	<b>6</b>
<b>Karuri</b>	1	2	3	<b>6</b>
<b>Ndumberi</b>	1	2	4	<b>7</b>
<b>Total</b>	<b>2</b>	<b>6</b>	<b>11</b>	<b>19</b>

(Source: District Education Office, Kiambu East District)

It is important to note that one of the schools in Karuri zone has been operating as a mixed boarding school but has been categorized as a girls boarding school as it is in the final stages of phasing out the boys and will be fully girls boarding by next years. One of

the schools categorized as a mixed school in Ndumberi zone is also in the process of phasing out the girls so as to become a purely boys school in the next three years.

### **1.1.3 Performance of Secondary Schools in Kiambaa Division**

The performance of any secondary school in the end of course examination is considered as an important indicator of the cognitive achievement of its students as well as the quality and effectiveness of the teaching and learning activities in that school. As such, a sizeable amount of resources in a school are dedicated to teaching and learning aimed at ensuring students perform optimally in these examinations as this is considered the core business of any school. In the Kenyan education system, KCSE examinations are administered at the end of a four year course in secondary schools. Since a student's performance in KCSE determines how easily one transitions into tertiary institutions for higher education and consequently access good opportunities for social economic advancement, KCSE performance is perceived as a fairly good measure of success or failure for both the individual student and the school. Value addition is a concept that has been embraced in evaluating performance of schools where a student's academic achievement on admission to form one (i.e. KCPE results) is compared to academic achievement (i.e. KCSE results ) at exit to determine if the schooling system has improved, stagnated or eroded the student's cognitive abilities. Good performance is said to have been achieved where comparison of KCPE and KCSE results show that learners have maintained good grades or better still improved their grades.

The various measures being taken to enhance cognitive achievements of students at national, provincial and district level in secondary schools in this district are highly indicative of the growing concern that education managers have about the less than satisfactory and in many cases, falling academic standards in many schools. Performance improvement measures adopted by schools in the division include nation wide programmes such as Strengthening Maths and Science Subjects Education (SMASSE), regional strategies such as "Operation Effective 30/35/40", an emphasis on strategic management in schools and an intensification of in-service training. The oscillation of school means grades at a C- average in Central Province has caused great concern and

this lead to the adoption and institutionalization of the earlier mentioned regional strategy dubbed “Operation Effective 30/35/40” in May 2008. While launching it, the Provincial Director of Education emphasized that the overall aim of the strategy was to jump start the performance of all primary and secondary schools in Central Province to greater heights. A general consensus exists among stakeholders of the education process in Central province that KCSE grades are telling of a level of underperformance given the relatively good resource endowment of the schools and the region in general. Table 1.2 below shows a summary overview of KCSE performance in the division, district and province over the last four years while Table 1.3 shows students’ transition rates into tertiary institutions in the division over the last two years.

**Table 1.2: KCSE Performance in Central Province, Kiambu East District and Kiambaa Division from 2005-2008**

<b>Year</b>	<b>2008</b>	<b>2007</b>	<b>2006</b>	<b>2005</b>
<b>Central Province Mean Score and Mean Grade</b>	4.78 C-	4.93 C-	4.56 C-	4.94 C-
<b>Kiambu East District Mean Score and Mean Grade</b>	4.67 C-	4.85 C-	4.17 D+	4.05 D+
<b>Kiambaa Division Mean Score and Mean Grade</b>	4.61 C-	4.77 C-	4.79 C-	4.58 C-

**Table 1.3: Summary of Kiambaa Division KCSE Performance by Grouping of Grades in 2007 and 2008**

<b>Grades</b>	<b>2008</b>	<b>2007</b>	<b>Transition Implication</b>
<b>A, A-, B+</b>	09.64%	07.95%	Assured university admission on government sponsorship
<b>B, B-, C+</b>	19.98%	25.31%	Possible university admission
<b>C, C-, D+</b>	32.43%	38.82%	Possible middle level college admission
<b>D, D-, E</b>	33.86%	27.81%	Wastage

(Source, District Education Office, Kiambu East and Provincial Education Office, Central Province)



#### **1.1.4 School Performance in KCSE Examinations and CSFs**

Poister and Streib (1999) assert that effective public administration in the age of results oriented management requires public agencies to develop a capacity for strategic management which is the central management process that integrates all major organizational activities and functions and directs them towards advancing an organizational strategic agenda. The CSFs influence and enable the setting of strategic goals which are then translated into operational goals and then into operational activities (Carelli et al. 2004). Today, it is evident that strategic planning has gained widespread currency among governments units although they have been slower to implement full-fledged strategic management processes. Bryson (1988) defines strategic planning as a disciplined effort to produce fundamental decisions and actions that shape and guide what an organization is, what it does and why it does it. Strategic management is more encompassing and entails strategic planning as a principal element but not the essence of strategic management which also involves resource management, implementation, control and evaluation. A strong strategic management capability is essential as it provides a short and long term sense of direction for the governmental agency relative to its internal and external environment which could be shifting continually (Poister and Streib, 1999).

As schools embrace strategic planning and develop strategic management capabilities, they must bear in mind the critical success factors as they set the strategic agenda. For several years, strategic management methodologists have understood the importance of identifying an industry's critical success factors as focal points for environmental assessment (Leidecker and Bruno, 1984). Roney (2003) makes a case for CSFs usefulness in strategic planning and management by asserting that the preferred approach to using them is to compare competitors on the basis of CSFs. In doing so, it is helpful to compare winning versus losing competitors and to identify critical functions that distinguish winners from losers so that a firm's strategy to enhance internal capabilities can be focused on gaining distinctive competence where it matters most. KCSE results are a major performance indicator and are used to evaluate academic standards in all public schools in Kenya. As per Roney's assertion, strategies addressing themselves to

raising academic standards in schools should be made after comparing “winning” versus “losing” schools in terms of KCSE performance so as to identify the critical factors that distinguish winners from losers. The school will then be in a position to come up with a strategy to enhance internal capabilities that is focused on gaining distinctive competence where it matters most.

## **1.2 The Research Problem**

Leidecker and Bruno (1987) clarifying the concept of CSFs state that they are the internal characteristics, or competences of a firm, that can have significant impact on its potential for commercial success. They further emphasize that since each industry or segment has its own collection of CSFs, an empirical diagnosis of these factors can provide unbiased criteria with which to evaluate the firm's strengths and weaknesses and to formulate objectives for competitive improvement. They also observe that CSFs are likely to change over time thus they must be reviewed periodically. CSF commentators agree that the essence of the CSF approach to management is what they call “focused specialization”. This is concentration of resources and efforts on those factors capable of providing the greatest competitive leverage. As schools adopt strategic management in a bid to improve service delivery and achieve enhanced academic standards, KCSE performance takes a very central position as a chief indicator of success or failure. As school managers strive to uplift academic standards and consequently improve KCSE performance, ignoring CSFs while planning, implementing, controlling and evaluating strategy is to risk poor performance. This is because as highlighted earlier, underperforming in CSFs seriously undermines the organizations efforts.

This study has been necessitated by the on going concern for enhanced academic performance by all stakeholders in the education process. The government has a concern for attaining a significant increase in the transition rate from secondary schools to technical institutions and universities as outlined in the “Kenya Vision 2030” strategy paper. This is a concern that this research will help to inform. This concern and quest for quality education has also been captured in the vision statements of the Ministry of Education, and the TSC that employs almost all the teachers in public schools. At the

provincial level, this immense concern to register high quality grades and reduce if not eliminate poor quality grades has been addressed by means of “Operation Effective 30/35/40” which is a clarion call based on a performance improvement strategy launched in May 2008. This strategy is intended to jump start academic performance in primary and secondary schools in Central Province to greater heights. The Kiambu East District Education Office motto “Quality Education, Our Quest” also captures this emphasis on high academic standards in all primary and secondary institutions. As such, the District Education Office developed and launched its first strategic plan in June, 2009. Results oriented management and strategic planning in schools have meant that academic goals and objectives as well as strategies to achieve them are now being explicitly stated and communicated to all stake holders. Consequently, stake holder expectations are being raised and school governing bodies i.e. Boards of Governors (BOG), Parents and Teachers Associations (PTA), school sponsors and other stake holders have become more aware, expectant and demanding of high academic standards. If high academic standards are to be achieved in secondary schools leading to improved performance in KCSE examinations, an investigation of the CSFs that require “focused specialization” is essential.

A knowledge gap exists as a study relating CSFs as an aspect of strategic management and the performance of public sector organizations in Kenya and in particular public secondary schools has not yet been carried out. Studies on CSFs in petroleum retailing in Kenya (Mbugua, 2005), Enterprise Resource Planning (ERP) implementation in Kenya (Nyaga, 2006), and in the management of classified hotels in Nairobi (Muindi, 2006) have been done. Literature is also richer in information on CSFs identification and application in the private sector than in the public sector. For example, conceptual papers relating CSFs and small business management, higher education in Malaysia, product innovation e.t.c. have been written. Recent studies on the factors affecting performance of KCSE exams in Kenya have also not specifically addressed the underlying CSFs. They have addressed general variables affecting students performance in KCSE in various areas such as Makueni district (Kivuva, 2004), Kitui (Ngiti, 2005), Meru South (Mugambi, 2006), Kirinyaga district (Mureithi, 2007), Mumias division (Sheunda, 2007)

and day schools in Embu district (Karue, 2008). Other studies investigating how specific variables affect KCSE performance have also been carried out. These are variables like the principal's job commitment (Nyambo, 1998), the principal's management of the curriculum (Anyango, 2005), school culture (Njoroge, 2007), head teacher's leadership style (Mwalala, 2008) and head teacher's communication modes (Kuria, 2008). This exploratory study seeks to build on this prior research by indentifying those key or critical variables education managers should take cognizance of and prioritize as they work towards uplifting the academic standards of their institutions. This research seeks to make these CSFs more explicit rather than implicit so that they influence and enable the setting of a strategic agenda in secondary schools that is more accurate as it prioritizes areas that have the greatest potential to undermine the institution's success.

While CSFs are not sufficient to ensure a successful outcome, they are necessary to achieve success (Parr and Shanks, 2000). As such, the CSFs that underscore a schools good performance in KCSE need to be explicitly stated. There is also a need to determine the extent to which schools have taken cognizance of underlying CSFs as they take measures to uplift academic standards and improve KCSE performance. This therefore constitutes the research problem for the proposed study. The study seeks to answer the following questions:

- i. What are the critical success factors that count for good performance in KCSE by public secondary schools in Kiambaa division?
- ii. Do public secondary schools in Kiambaa division base their success strategies on the critical success factors?

### **1.3 The Research Objectives**

- i. To determine the critical success factors that count for good performance in KCSE by public secondary schools in Kiambaa division.
- ii. To determine whether public secondary schools in Kiambaa division base their strategies on the critical success factors.

#### **1.4 Importance of the Study**

The purpose of the study is to establish those critical factors that policy makers and education managers must focus on and concentrate resources and efforts on in due to their ability to provide the greatest competitive leverage which in this case refers to improved academic standards in schools and KCSE performance. School administrators in both the public and private sectors will also benefit from the insights on critical factors affecting their success or failure in the core business in schools which is ensuring that high academic standards are attained and maintained. This study will also contribute to the literature and research on strategic management in basic education. Academicians will also use the findings for information on and further research on the application of critical success factors in public sector management especially in the basic education sub-sector. Other stake holders in the education sector such as school sponsors, school patrons, student alumni organizations e.t.c will also find the information relevant as it will enlighten them on and help them appreciate those critical factors that reinforce or undermine success in so far as uplifting education standards in secondary schools is concerned.

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1 CRITICAL SUCCESS FACTORS (CSFs)**

#### **2.1.1 The Concept of CSFs**

The term “success factors” was first coined by Daniel (1961) with regard to determining the information needs of management. Rockart (1979) was the first to put forward the term “critical success factors” which he defined as the limited number of areas in which results if satisfactory will enable successful competitive performance. He argued that ensuring the attainment of an organization's goals necessitated good performance in a few critical areas, and it was therefore imperative that management receive constant feedback regarding them. Bullen and Rockart (1981) further codified an approach that embodied the principles of success factors as a way to systematically identify the information needs of executives. In his seminal work on CSFs, Rockart (1981) notes that defining a CSF is not as clear as defining an organizational goal and provides a useful summary of similar but distinct definitions outlined as: key areas of activity in which favorable results are absolutely necessary to reach organizational goals; key areas where things must go right for the business to flourish; "factors" that are "critical" to the "success" of the organization; key areas of activities that should receive constant and careful attention from management; a relatively small number of truly important matters on which a manager should focus attention.

Boynton and Zmud (1984) define CSFs are those few things that must go well to ensure success for a manager or organization. Therefore they represent those managerial or enterprise areas that must be given special and continual attention to bring about high performance. Robson (1997) describes CSFs as that handful of things that must go right within someone’s job for the organization to flourish. Atkinson et al (1997) observes that CSFs are elements such as quality, time, cost reduction, innovativeness, and customer service or product performance that create long-term profitability for the organization. Saraph et al. (1989) view CSFs as those critical areas of managerial planning and action that must be practiced in order to achieve effectiveness. Johnson and Scholes (1999) describe CSFs are those components of strategy in which the organization must excel to outperform competition. They are underpinned by core competences in specific activities

or in managing linkages between activities. Thompson, Strickland and Gamble (2007) define CSFs as the competitive factors that most affect industry member's ability to prosper in the market place. They identify them as the product attributes, organizational competencies, competitive capabilities and market achievements that spell the difference between a strong and weak competitor and many times profit and loss. Caralli (2004) observes that CSFs are an explicit representation of the key performance areas of an organization. In this context, CSFs define those sustaining activities that an organization must perform well over time to accomplish its mission. He notes that they are found at every level of management, from executive to line management. To apply the CSF method and to use CSFs as an analysis tool, it is important to understand how they relate to the organization's strategic drivers and competitive environment.

### **2.1.2 Evolution of the CSF Concept and its Application**

Daniel (1961) alluded briefly to CSFs when he coined the phrase "success factors". He observed that an organization's information systems must focus on factors that determine organizational success if the firm was going to be effective in avoiding information overload. In the late 1970s and early 1980s, organizations found themselves in the midst of an information revolution with the advent of the personal computer and the evolution of the field of information "systems" to information "technology" which resulted in the production of significant amounts of information for analysis and decision making. On recognizing the challenge that the onslaught of information presented to senior executives, Rockart (1979) was the first to propose the CSF approach which would help executives clearly identify and define their information needs.

Dobbins and Donnelly (1998) contend that in spite of the availability of more information, research showed that senior executives still lacked the information essential to make the kinds of decisions necessary to manage the enterprise successfully. They have showed that the CSFs concept and approach initially used in the information technology planning arena is still very relevant today and applicable to many of the challenges being faced by modern day organizations. In their research on the use of CSFs in federal government program management, they suggested the broad applicability of

the CSF approach and identified the uses of CSFs to several areas including identifying the key concerns of senior management; assisting in the development of strategic plans; identifying key focus areas in each stage of a project life cycle and the major causes of project failure; evaluating the reliability of an information system; identifying business threats and opportunities and measuring the productivity of people. This pointed to the use of CSFs as a way for organizations to focus and validate many of the important activities they perform to accomplish their missions.

### **2.1.3 Significance of CSF's to Management**

Due to resource constraints faced by managers both in terms of time and money, they should spend their valuable time focusing on those factors which they perceive to have the greatest bearing on the performance of the business. The need for managers to identify and implement CSFs cannot be overstated because failure to do so greatly increases the risk of following a misdirected strategy. Rockart (1981) asserts that using success factors as a filter, management could then identify the information that is most important to making critical enterprise decisions. Accordingly, the underlying premise is that decisions made in this manner should be more effective because they are based on data that is specifically linked to the organization's success factors. Miller (1984) notes that CSFs when formally identified implicitly communicate top management priorities and thereby direct organizational efforts in the desired direction. The desired direction is attained through motivation of the firm's employees because the CSFs provide them with a framework against which they can make priorities, assumptions and analyze environmental conditions. This makes it easier for employees to contribute to the execution of long-range plans.

Jenster (1984) asserts that CSFs should be central in the planning process as they direct the attention of key managers to focus on the basic premise of the firm's strategy. He further asserts that CSFs must reflect success to the defined strategy, represent the foundation of this strategy, be able to motivate and align managers and other employees and finally be very specific and or measurable. He notes that they can be used to guide and motivate key employees to perform in a manner that will ensure successful



performance through the strategy. As such, effective leadership necessitates the clear definition of success factors, the ideal organization performance in relation to them, and the explicit communication of these factors to all appropriate levels of management in a structured manner. Jenster (1984) further observes that isolating CSFs provides a vehicle for the design of an effective performance measurement and control system. The CSF approach becomes more than just identifying the areas that “must go right”, but assumes a powerful strategic role in which the specific efforts of top management and the employees are joined and aligned in a manner consistent with the firm's vision which contributes significantly to the successful execution of long-range plans.

Dickinson et al (1984) observe that CSFs are significant to management because they provide a comprehensive and systematic approach for identifying and making decisions on all actions which ought to be undertaken, including contingency planning. They also help management focus on criticality by identifying what is critical to the success of the company and giving it a good deal of analysis and insight which then yields actionable items. CSFs also help clarify assumptions as they make explicit all those assumptions that are implied when goals are set and plans are drawn. Because CSFs are constantly evolving, they introduce flexibility into decision making that is not likely to be there. By causing managers to think through moves that ensure that a CSF will be covered, they are forced to consider issues from a different perspective and focus more on new alternatives. Wign and Veen-Dirks (2002) assert that CSFs are the factors on which a company can distinguish itself from competitors and thus build a stable and positive relation with the market.

#### **2.1.4 Strategic planning and CSFs**

The essence and importance of the CSFs in strategic planning is because an organization primarily exists to serve its stakeholders; the customers, employees, business partners, shareholders, and communities that benefit from the organization's existence and growth. The organization's mission embodies this focus by stating the organization's purpose, vision, and values. Stakeholders are best served when an organization operates in a manner that ensures the mission is accomplished. Strategic planning provides a means for

ensuring that the entire organization is focused on a shared purpose and vision. Accomplishing the mission in a logical and systematic way requires the organization to develop a strategy. The strategy encompasses a set of goals or targets that the organization must achieve in a specific period of time. These goals are transformed into lower level tactical plans and activities to be carried out at various levels throughout the organization. Thompson et.al, (2007) note that sound strategy incorporates the intent to stack up well on all of the industry's CSFs and excel in one or two CSFS. Using industry CSFs as cornerstones for the company's strategy and trying to gain suitable competitive advantage by excelling at one particular CSF is a fruitful competitive strategy approach. Caralli et al (2004) observe that CSFs influence and enable the setting of organizations strategic and operational goals. As such, the strategic and operational goals must relate to CSFs if the firm is to achieve its mission. They also maintain that one of the major shortcomings in strategy formulation and implementation in organizations is the failure to translate statements of strategic purpose into an identification of those factors which are critical to achieving these objectives and the resources and competences which will ensure success.

Managers generally recognize their own as well as the organization's CSFs when they see or hear them, but may be unable to clearly and concisely articulate them or appreciate their importance. Most managers are generally intuitively aware of the variables they must manage to be successful, yet only when problems arise and root causes are identified are these variables made explicit. Managers implicitly know and consider these key areas when they set goals and as they direct operational activities and tasks that are important to achieving goals. However, when these key areas of performance are made explicit, they provide a common point of reference for the entire organization. Thus, any activity or initiative that the organization undertakes must ensure consistently high performance in these key areas; otherwise, the organization may not be able to achieve its goals and consequently may fail to accomplish its mission. CSFs are powerful because they make explicit those things that a manager intuitively, repeatedly, and even perhaps accidentally knows and does, or should do, to stay competitive. When made explicit, a

CSF can tap the intuition of a good manager and make it available to guide and direct the organization toward accomplishing its mission. (Caralli et al, 2004).

### **2.1.5 Dimensions of CSF's**

Rockart (1981) observes that CSFs have various dimensions and can be viewed from two perspectives either as internal and external CSFs or monitoring and adapting CSFs. Internal CSFs are those that are within the span of control for a particular manager while external CSFs are those over which a manager has very little control. Categorizing a CSF as either internal or external is important because it can provide better insight for managers in setting goals. For internal CSFs, managers should set very specific and achievable goals because they have control over them. For external CSFs, managers must set goals that aim to achieve the CSF by minimizing any negative impact on operations that may result because the CSF is not in his or her direct control. Monitoring CSFs emphasize the continued scrutiny of existing situations. Because monitoring the organization's health is a primary function of management, almost all managers have some type of monitoring CSF. Conversely, adapting CSFs are focused on improving and growing the organization. Adapting CSFs reflect the organization's desire to improve their competitive position or to make a major change in their mission

Dickinson et al., (1984) observe that internal determinants of CSFs in a company include the particular characteristics of its products, processes, people and structures. Internal CSFs are clearly actionable, measurable and controllable through the use of critical performance indicators (CPIs) and any associated critical performance measures (CPMs). Brotherton and Shaw (1996) assert that external CSFs are derived from the operating industry at the meso-level from the nature of the industrial and market structures and dynamics within which it operates. They are also derived from broader conditions and trends in the wider, more remote, macro business environment that includes political, social, economic and technological conditions. External factors are less controllable than internal ones thus for them the aim is to monitor in a bid to reduce their impact on the firm's activities.

### **2.1.6 Sources of CSFs**

CSFs are generally described within the sphere of influence of a particular manager because there are many levels of management in a typical organization, each of which may have vastly different operating environments. Executive-level managers may be focused on the external environment in which their organizations live, compete, and thrive while line-level managers may be concerned with the operational details of the organization and therefore are focused on what they need to do to achieve their internal, operational goals. Because of these different operational domains, the CSFs for the organization will come from many different sources. All are important for the organization as a whole to accomplish its mission, regardless of their source (Carelli, 2004). Rockhart (1981) defined five specific types and sources of CSFs for the organization as follows: industry CSFs derived from the industry in which the organization competes or exists; competitive-position or peer CSFs which emanate from an understanding of the organization's peers; environmental CSFs derived from the general business climate or organizational environment; temporal CSFs which emanate from problems, barriers, or challenges to the organization; management-position CSFs derived from layers of management

The term "industry" in this context describes an organization whose purpose, vision, and mission is typically similar to those of its peers. The concept of industry CSFs has been applied to organizations that have a commercial, educational, public-service, or non-profit orientation. Firms are part of industries and must be aware of what is happening within the industry, detect change and respond accordingly. Failure to achieve these CSFs may render the organization unable to stay competitive in its industry and may ultimately result in its exit. Thompson, Strickland and Gamble (2007) assert that managers and strategists need to understand the industry landscape well enough to separate the factors that are most important to competitive success and those that are less important. They further observe that CSFs vary from industry to industry and from time to time within the same industry as driving forces and competitive conditions change.

Competitive position or peer-group CSFs are a further delineation of industry-based CSFs. They define those CSFs that are specific to the organization's unique position relative to their peer group in the industry in which they operate or compete. Organizations that are leaders in their peer group may have CSFs that are aimed at ensuring they maintain or increase their market share against other organizations in the industry. Organizations that are considered laggards may have specific CSFs aimed at closing the gap and improving their competitive position relative to other organizations in their industry. Kenichi Ohmae (1982) advocates a straightforward and commonsense approach to identifying CSF's. He argues that for a firm to survive and prosper in an industry, the firm must meet two criteria: first, it must supply what customers want to buy; secondly, it must survive competition. Hence an analysis of demand and an analysis of competition are imperative in determining a firm's CSF's. Porter's five forces model (1980) is quite popular in the analysis of the industry structure i.e. suppliers, buyers, substitutes, new entrants and competition. Evaluating each element and their interrelationships provides important data in identifying and justifying industry and competitive position CSFs.

Macro environmental CSFs refer to the general business climate in which the organization operates. Organizations have very little control or ability to actively manage macro environmental factors such as social-political, legal, economic and demographic changes. An organization must acknowledge the environmental factors that can affect its ability to accomplish its mission. By making these factors explicit, the organization can at least be mindful of them and actively monitor its performance relative to them.

Temporal CSFs refer to some limitations within the business which may affect the implementation of a chosen business strategy in the short run. They are indicative of the areas in which the organization must temporarily perform satisfactorily in order to ensure that its ability to accomplish its mission is not impeded. They arise due to temporary conditions, problems, barriers, or challenges facing the organization for example cash flow limitations, skill shortage etc. Despite CSFs being generally tied to the long-term planning horizon of an organization thus remaining fairly constant, at one time or another, every organization encounters temporary conditions or situations that must be

managed for a specific period of time, while continuing to maintain its performance in all other areas. It is worth noting that a temporal CSF may be an indication of a permanent change in the organization's industry, operating environment, or competitive position and as a result may be adopted as a long-term organizational CSF because of its strategic importance.

Every layer of management has a different perspective and focus in the organization. This division of labor ensures that both tactical and strategic actions are taken to accomplish the organization's mission. Managers have different focuses and priorities depending on the layer of management in which they operate. This translates into a set of CSFs that reflect the type of responsibilities required by the manager's position in the organization. Caralli (2004) argues that the CSFs that are inherent to a particular level of management may be universal across different organizations in the same industry. For example, executive-level managers may have CSFs that focus on risk management, whereas operational unit managers may have CSFs that address production control or cost control.

To be effective, managers must consider and monitor a wide range of activities, events, and conditions that occur throughout the organization and in the external environment in which the organization operates. Leidecker and Bruno (1984) note that the concept of CSF analysis should be applied at the level of the firm, the industry and the social-political environment level. They outline some techniques used in internal and external CSF identification which include macro and micro business environment analysis, analysis of industry structure, analysis of competition and analysis of the dominant firm in the industry, company assessment, temporal or intuitive factors and industry or business experts' views. Gathering CSFs that incorporate and reflect various CSF sources and dimensions provides an effective delineation of a manager's field of vision as well as a representation of the depth and breadth of the manager's responsibilities (Caralli, 2004)

### **2.1.7 Criticism of CSF approach**

Some experts have disputed the strategy making value of CSFs. Ghemawat (1991) argues that the whole idea of identifying a success factor and chasing it seems to have something

in common with the ill-considered medieval hunt for the “philosophers stone”, a substance which would transmute everything it touched into gold. He further contends that there is no universal blueprint for a successful strategy and even for individual industries there is no “generic strategy” that can guarantee superior profit ability. However, each market is different in terms of what motivates customers and how competition works. Understanding these aspects of the industry environment is the prerequisite for an effective business strategy. Grunert and Ellegard (1993) argue that since causes of success in a market are dynamic, success factors may be transient and concretizing them through strategy may give rise to serious problem. They further argue that if success factors operating in a market are identified by the actors who then all invest in the same skills and resources, the ability of variation in these skills and resources to explain variation in success will necessarily decline.

## **2.2 Examination Performance in Schools**

Education is generally viewed as a panacea to the social and economic woes that ail any country. London’s Department for Education and Employment (DFEE, 1997) in a paper titled “White Paper: Excellence in School” notes that economic and social disadvantage can only be overcome and equality of opportunity can only be a reality if very deliberate efforts are made to eliminate and never excuse under achievement in the most deprived parts of the country. They assert that the spiral of disadvantage in which alienation from, or failure within the education system is passed from one generation to the next can be overcome when this happens. The approximately eighteen percent budgetary allocation to education by Kenya’s government currently is indicative of the very high priority given to education on the road to “Vision 2030” (Kenya National Bureau of Statistics, 2009). The Ministry of Education in Kenya also outlines in its vision its pursuit for a globally competitive quality education for all citizens.

Effective schools are the means by which the vision of quality education can be attained. Levine and Lezotte (1990) and other effective schools movement commentators are in consensus that an effective school can be described as one where all the students master the intended curriculum. Notwithstanding much debate on how best to measure

curriculum mastery, this research will limit itself to the use of one widely agreed on approach whereby academic achievement as reflected by performance in examinations is used as an indicator of schools effectiveness. Eshiwani (1993) asserts that the quality of education is seen in terms of the number of students passing national examinations. The assertion that secondary grade test scores effectively accesses the quality of education by evaluating mastery of curriculum, assumes that the examinations administered are standard and have adequately addresses the learners cognitive achievement at all levels i.e. knowledge, comprehension, application, analysis, synthesis and evaluation. It also assumes that test scores access and give an indication of growth in the learners' affective domain and development of psychomotor skills (Bloom, 1956).

The issue of poor academic performance in examinations signifies a critical impediment in any country since education is a major contributor to economic growth (Atkinson, 1987). Casual observation confirms this assertion as it is quite evident that poor performance in KCSE has greatly curtailed many students' chances of joining tertiary institutions and consequently limited their chances of gainful other or self employment, and as a result their participation in national development. Ongiri and Abdi (2004) observe that the quality of education as measured by student achievement in national examinations is seen to be below average standards in Kenya. They report that many of the country's 4,000 secondary schools post poor examinations results year in year out and that there are only about 600 schools that excel and if a student is not in any of these schools he or she is not expected to get a credible grade. Year 2008 KCSE examination results in Kiambu East District where Kiambaa division is found reveal test scores that are skewed to the left. Out of the approximately 4984 students who received their KCSE results, about five percent have assured transition into the country's public universities on government scholarship. Another seventeen percent can automatically gain admission into local universities while thirty eight percent can access middle level colleges subject to the availability of funds to pay college fees. The confirmed wastage rate of students scoring grades D, D- and E is about forty percent as the grades are too low to allow for college admission (DEO, Kiambu East, 2009).



### **2.2.1 Factors Influencing Students Performance in National Examinations**

Eshiwani (1993) citing Schiefelbein and Simmons (1981) research on achievement in examinations outlines three main determinants in third world countries: school resources and processes including class size, text books, school administration and management, library and laboratory services; teacher characteristics such as teacher qualifications, teacher-pupil ratio, professional commitment and transfer index; student traits which include previous school experience and social characteristics. Bali et al, (1984) cited factors crucial in determining performance as discipline in schools, schools administration, preparedness of students by teachers for examinations, student's intelligence quotient and family background. Duignan (1986) identifies the following factors as influencing performance of learners in examinations: leadership and decision making, school culture and social climate, teacher behavior, student behavior, parental support and involvement and the social-economic background of students. Indongole (1987) notes that learning environments vary widely in terms of socio-psychological, cognitive and environmental factors and the quality of the learning environment reflects either positively or negatively the candidate's performance in final examinations. Carvon and Chau (1996) assert that it is difficult to generalize the factors which can explain the differences in performance between one learner and another and there is certainly no one single factor or few factors in isolation. Mizala and Romaguera (2000) quote econometric studies which have shown that three factors affect examination results: the characteristics of students and their families, the inputs into the educational process and the structure of the system itself. Mayer et al (2000) in a research entitled "Monitoring School Quality" commissioned by the United States of America Department of Education identifies large differences in the quality of schools in a way that rules out the possibility that they are driven by non-school factors.

Kivuva (2004) in a research on factors affecting KCSE performance in Kilungu division, Makueni District identified that the factors precipitating success were the primary grade test (KCPE) scores, the availability and nature of teaching learning facilities, the availability and non-availability of teachers in certain subjects, the provision of assignment to student and follow up and management of homework and supervision of

preps in school or at home. Factors occasioning failure were low entry marks at form one, high teacher workloads, poor learning facilities, poor socio-economic backgrounds and too much involvement in home chores. Mugambi (2006) investigated how school related factors, learner related factors and non-school related factors affect the teaching and learning process and eventually the individual student's performance in KCSE in Meru South district. This research investigated school related factors such as the school administration, teacher qualities, instructional approaches, teaching and learning resources, physical facilities and class size; learner related factors included self concept, inherited personal characteristics set and intent, language; non-school related factors included cultural practices, social economic status of the family, parental level of education and peer group influence. The research findings revealed that factors that had the most significant bearing on performance were teacher characteristics, availability of teaching and learning resources in the school, primary grade test scores and the category or type of school. Kiambu East District education office identifies the following as the main factors contributing to the low academic achievement in the secondary schools: inadequate parental support; low commitment levels among some learners, head teachers and teachers; understaffing in some schools; proximity to Nairobi that lures some students to venture into hawking, matatu touting and drug abuse; overemphasis by the community on acquisition of material wealth at the expense of education.

### **2.2.2 Success Factors In National Examination Performance**

Indongole (1987) observes that achievement that falls below a set standard is a reflection of a disadvantaged educational process. Education managers are responsible for ensuring that high education standards in their institutions are attained and maintained, the end result of which is students that perform to their maximum potential in national examinations. To do this effectively, relevant literature identifies certain factors that are critical to the success of the process. The Kiambu East District education office strategic plan for 2008-2012 outlines eight critical success factors that must be addressed if it is to realize and sustain quality education in the district. These are: enhanced commitment and dedication by education officials, school principals and teachers; building capacity at all levels; enhanced curriculum management, supervision and effective lesson delivery;

increased parental and community participation; improved school discipline; open channels of communication; prudent time management; effective leadership at all levels.

Earlier thinking in the field of education was based on the work of researchers such as Coleman (1966) who was foremost among a group of social scientists who during the 1960s and 1970s believed that family factors such as poverty or a parent's lack of education prevented children from learning regardless of the method of instruction. Coleman's assertion was that schools did not play any predominant role in determining educational attainment of students. Levine and Lezotte cite Jencks (1972) who also came to similar conclusions maintaining that the equalization of school resources would not make students significantly more equal after they completed school and that the most important determinant of educational attainment was family background. Coleman's report, along with the related literature, was the catalyst to the creation of "compensatory education" programs that dominated school improvement throughout those decades. These programs focused on changing students' behavior in order to compensate for their disadvantaged backgrounds and made no effort to change school behavior.

Edmonds (1982) in a published paper titled "Programs of School Improvement: An Overview," disputed this view by Coleman and observed that this thinking and the resultant programs focused on changing students' behavior in order to compensate for their disadvantaged backgrounds and made no effort to change school behavior. Edmund argues that while schools may be primarily responsible for whether or not students function adequately in school, the family is probably critical in determining whether or not students flourish in school. Murphy (1992) maintains that prior to the effective schools movement, explanations for student failures were focused on deficiencies in the students themselves and in the home and community environments in which they were nurtured. Ndiritu (1999) found no correlation between socio-economic background and performance but found out that poor children are regularly sent home from school because of non-payment of levies. This means that in as much as they are good learners and often disciplined as they fear being sent home from school back to the deplorable

conditions. Their absence due to non-payment of fees impacts negatively on their performance.

#### **2.2.2.1 Success Factors from the Effective Schools Movement Literature**

Following a research in elementary schools in the United Kingdom, Edmonds became the first to formally identify five school attributes that positively affect student achievement. The attributes now collectively referred to as “effective schools correlates” were outlined as: a strong administrative leadership by the principal notable for substantial attention to the quality of instruction; instructional effectiveness emanating from a pervasive and broadly understood instructional focus; an orderly, safe climate conducive to teaching and learning; teacher behavior that conveys the expectation that all students are expected to obtain at least minimum mastery; frequent monitoring of students progress as the basis for program evaluation. Edmonds findings arrived at from research in elementary schools United Kingdom confirmed an earlier research by Rutter, et al (1979) who conducted a similar research in secondary schools in the United Kingdom. The conclusions they reached about school attributes that positively affect student achievement were nearly identical to those rising out of Edmonds research.

Edmonds, Brookover, and Lezotte were the original researchers to develop a body of research that supported the premise that all children can learn and that the school controls the factors necessary to assure student mastery of the core curriculum. Levine and Lezotte (1990) cite tens of subsequent research studies that further confirm the attributes of schools where mastery of the curriculum by all has been largely achieved. They observe that these schools have continued to bear out the basic beliefs of the effective schools movement research which are that: all children can learn and come to school motivated to do so; schools control enough of the variables to assure that virtually all students do learn; schools should be held accountable for measured student achievement; schools should disaggregate measured student achievement in order to be certain that students, regardless of gender, race, ethnicity, or socioeconomic status are successfully learning the intended school curriculum; the internal and external stakeholders of the

individual school are the most qualified and capable people to plan and implement the changes necessary to fulfill the learning for all mission.

Levine and Lezotte (1990) note that the “Effective Schools Movement”, its constituent research, and the correlates themselves have not only withstood the test of time, but have also evolved and grown as the understanding of effective schools has both deepened and broadened. The early definition was cast in terms of mastery of the essential curriculum, i.e., reading and arithmetic. Over time, other curricular outcomes were added: problem-solving ability, higher-order thinking skills, creativity, and communicative ability. Furthermore, the early Effective Schools Movement emphasized the individual school as the unit of change. Eventually, it became clear that school improvement resulting in increased student achievement could only be sustained with strong district support. Organizational management theories provided significant additions to effective schools research and policy. The concepts of decentralization and empowerment, the importance of organizational culture, and the principles of total quality management and continuous improvement have added important dimensions to the understanding of effective schools. Over the years, the correlates have been refined, expanded and utilized by Gauthier (1982, 1985), Shoemaker (1982), Villanova (1984) among others, to include the following eight aspects: instructional leadership; clear and focused mission; safe and orderly environment; climate of high expectations; frequent monitoring of student progress; positive home-school relations; opportunity to learn and student time on task.

Although these are correlates and not causative factors, they are very useful in that they provide school improvement teams with a comprehensive framework for identifying, categorizing, and solving the problems that schools and school districts face. These correlates are a product of unspecified processes, actions and characteristics of effective schools. They provide a good ground for identifying CSFs associated with school effectiveness that leads to optimal performance in examinations. This is especially so because the correlates are based upon the documented successes of schools that were deemed successful in educating children and determine what seemed to be the common traits among them. These factors point to industry CSFs as they make key areas of

performance in all schools explicit, and provide a common point of reference for the entire organization. Thus, any activity or initiative that the school undertakes must ensure consistently high performance in these key areas; otherwise, the organization may not be able to achieve its goals and consequently may fail to accomplish its mission (Carelli et al, 2004).

Rutter et al, (1979) note that to improve students' performance head-teachers are required first to improve the management of the schools. This can be done by setting a clear vision for the school and communicating this vision to students, supporting its achievement by giving instructional leadership, resources and being visible in every part of the institution that account for students' performance. Instructional leadership requires that the school principal understand and apply the characteristics of instructional effectiveness in the management of the instructional program as well as effectively and persistently communicate the mission of the school to staff, parents, and students. Eshiwani (1983) contends that good performance in school is relatively equated to good administration. Schools that consistently perform well tend to have sound and efficient administrators. Griffith (1996) argues that school administrators have a direct bearing on achievement of learners because they have a key role to play in coordinating, directing and facilitating the learning process. He observes that many schools are brought down by management. Duignan (1986) asserts that the school principal should tie together all other correlates of effective schools such as setting an atmosphere of order, creating a climate of high expectations for staff, collaborative leadership and building commitment among students and staff to school goals. Clearly, the role of the principal as the articulator of the mission of the school is crucial to the overall effectiveness of the school. Hellinger, et al (1995) note that head teachers should use their managerial skills to set the school direction so as to realize a suitable learning and working environment.

Effective school commentators maintain that a clearly articulated mission of the school becomes the means through which the staff shares an understanding of and a commitment to the school's goals, priorities, assessment procedures, and accountability. The staff in the effective school accepts responsibility for the students' learning of the essential

curricular goals. This idea of a shared sense of mission is one way to assure that all key stakeholders are moving in the same direction. A safe and orderly environment is described a school that is orderly, purposeful, with a business-like atmosphere and free from the threat of physical harm. The school climate is not oppressive and is conducive to teaching and learning. Rules must be enforced with absolute consistency across all teachers and administrators in the school. Inconsistency will quickly undercut and destroy the orderly environment of a school.

A climate of high expectations where the staff believes and demonstrates that all students can obtain mastery of the school's essential curriculum is crucial. The belief that the staff has the capability to help all students obtain that mastery is necessary. An expectation is the internal belief that the staff have that the students can and will meet those higher standards. DFEE (1997) asserts that one of the most powerful underlying reasons for low performance in schools has been low expectations which have allowed poor quality teaching to continue unchallenged. Too many teachers, parents and pupils have come to accept a ceiling on achievement which is far below what is possible. The literature also maintains that if a school is to be effective in its core business, pupil progress over the essential objectives must be measured and monitored frequently, and the results of those assessments used to improve the individual student behaviors and performances, as well as to improve the curriculum as a whole.

The effectiveness of the school is greatly enhanced by parents who understand and support the basic mission of the school and are given opportunities to play important roles in helping the school to achieve its mission. Parental participation is of great importance as a factor determining pupil's performance. This relationship has been observed even when school level variables like class size, school students population, teacher qualifications and experience were controlled (Griffins 1996). The probability of a parent attempting to establish and maintain a home environment that is both encouraging and supportive towards academics increases when the school brings in the parent as a partner in the education of their children. Smith et al (1989) observe that a

home environment which enhances positive self esteem may improve academic performance.

Opportunity to learn and student time on task implies that teachers allocate a significant amount of classroom time to instruction in the essential curricular areas. One of the first prerequisites if students are to master certain curricular objectives and goals is to ensure that they spend time on them. Students must be actively engaged in whole-class or large group, teacher-directed, planned learning activity for a high percentage of classroom time. Time on task implies that each of the teachers in the school has a clear understanding of what the essential learner objectives are, grade by grade and subject by subject. The challenge in schools stems from the interruptions in the day-to-day flow of routines in the classroom which cause serious and significant detractions. The Kenya National Examination Council cited lack of adequate revision time as a factor in poor K.C.S.E performance. (K.N.E.C report, 2002)

#### **2.2.2.2 Other Success Factors in National Examination Performance**

Waweru (1982) carried out a study to investigate how social economic background influence pupil's achievement in Kenya and found that teachers experience and commitment to students learning emerge as key characteristics to successful learning and achievement. Wamai (1991) carried out a study in Kenya and established that the academic qualifications of teachers and availability of teaching learning resources were the most important factors that determined achievement of learners. He established that "Harambee" schools which relied mostly on untrained teachers had a significantly higher failure rate in national examinations than government schools which were generally, manned by trained teachers. His study demonstrated that the greater the number of untrained teachers, the poorer the performance and subsequent order of merit ranking of the school in national examinations. In Kenya, KCSE results reveal that well established higher cost schools consistently perform better than lower cost schools. This may be because low cost schools are poorly equipped with learning resources and facilities. From the findings of these and other studies on factors affecting students performance in examinations, certain factors have repeatedly being identified a bearing quite a significant



influence. These can be categorized into three items which are: teacher quality; teaching and learning resources; adequacy of physical facilities like classrooms, laboratories and libraries.

Teacher quality impacts learners in that expert teachers are more sensitive to student needs and individual differences; they are more skilled at engaging and motivating students and they can call upon a wider repertoire of instructional strategies for addressing student's needs (Berliner, 1986; Schulman, 1987; Cross man, 1990). Mayer et al (2000) cite Rivkin, Hanushek, and Kain who assert their conclusion that the most significant source of achievement variation is the teacher quality. They note that even though these researchers found that teacher quality is important, their data sets did not contain enough information to allow them to explain what exactly makes one teacher more or less effective than another. Mayer et al (2000) cite numerous studies related to teacher quality which suggests that to ensure excellence, teachers should have high academic skills, be required to teach in the field in which they received their training, have more than a few years of experience, and participate in high-quality induction and professional development programs. Onguti (1987) observes that a trained teacher is an asset to an institution as such a teacher has learnt the tricks of handling individual differences in classroom situations. Such a teacher is therefore confident and imparts the same confidence in the learners. Mugambi (2006) citing Moskowitz and Hayman (1974), Murnane and Philips (1981) and Rottenberg and Berliner (1990) mention that their studies on teacher experience and effectiveness in teaching consistently show that teachers with less than three year experience tend to be less effective than more experienced teachers. They assert that in an unsupported environment, most beginning teachers experience a wide range of problems in learning to teach.

The K.N.E.C cited poor coverage of the syllabus, failure to understand questions by students, theoretical teaching and poor teaching methods as some of the weaknesses noted in students and this accounted for differing levels of performance (K.N.E.C report, 2001). All these are variables that an effective teacher can control from the classroom level. Wilson (1988) observers that great teachers are reputed to posses certain basic

kinds of skills which are listed as follows: charisma which he referred to as the powerful magnetic personality which enables the teacher to engage in mutual instructional interactions; knowledge of subject matter which he identifies as one of the teachers major asset during their instructional act; language skills which act as one of the most powerful tools during the instructional act and the excellent use of both verbal and body communication which delivers superior results; pedagogical skills which intimate the ability to structure knowledge for learning, questioning, developing and exploiting the potential resources. The teacher must be a person of wide intellectual interests and capabilities compared to the average person and be able to make the subject relevant to learners' lives, interesting and worthwhile to learn. Waweru (1982) notes that students learn better, learn more and remember more if they find pleasure in the learning experience. He asserts that when learning is associated with a pleasurable experience it becomes a life-long endeavor.

On teaching learning resources, Douglas (1964) observes that good teachers as they teach keep in mind what they teach and what they teach with. They organize and effectively incorporate teaching resources in the learning process. Instructional materials such as textbooks, visual and audio material not only enhance communication between the teacher and learner but also facilitate child centered learning and learning through discovery. Fyle (1993) argues that most African states tend to lay emphasis on “what to teach,” while “how to teach” has been almost entirely neglected. This implies that much attention has been given to the curriculum development and very little to the curriculum implementation in terms of teaching strategies and learning resources. Eshiwani (1988) observes that most schools which perform poorly spend less money on the purchase of teaching resources. The After School Education and Support Programme (ASESP, 1994) observes that teaching resources enhance retention of about eighty percent of what is learnt. They motivate and encourage participation by the learner in the learning process and help clarify concepts and add meaning to text. Any effective teacher knows that creatively choosing and combining carefully chosen learning resources and teaching makes the teacher more confident and consistent while teaching. This makes it easier for

learners to relate and interpret learned concepts thus aid better performance in examinations.

Studies have found instructional materials especially textbooks and library activity to be consistently related to achievement (Fuller, 1985). Heymanman (1975) cited in a World Bank report (1995) reported that “from the evidence we have so far, the availability of text books appears to be the single most factor in predicting academic achievement”. Studies on textbook availability suggest a pupil ration of 1:1 where students own books in a day school setting. However an often quoted research in Philippines suggests a marginal difference between 1:1 and 1:2 when school books are a property of the school and not taken home. Brunswick and Hagger (1992) suggested a ratio of 1:3 should be regarded as satisfactory. The Ministry of Education, Science and Technology (MOEST, 2003) points out that those textbooks whether designed for use in activities led by teachers or independently by pupils offer the most explicit instructional design format. Coleman (1966) found that the number of textbooks on loan from the library was significantly related to learner achievement in the USA.

Kyalo (1984) found that despite most science teachers in Kitui district complaining of inadequately equipped libraries and laboratories they also were not innovative enough and failed to utilize and improvise from resources available in the school environment to improve their teaching. Mugambi (2003) noted that in many SMASSE forums, it has been observed that despite inadequate resources, many science teachers do not efficiently use what is available as evidenced by expired chemicals in laboratories. They also ignore the fact that with improvisation, they could afford numerous activities for their students. SMASSE forums have also noted that more financial resources were in many cases directed towards non academic activities e.g. developing physical facilities, purchasing school buses, funding music, games and drama. This took preference over textbooks, laboratories equipment, chemicals etc. These findings imply school administration must provide teaching resources and teachers must also innovatively identify and effectively utilize these resources if they are to have the required impact on learning and examination performance.

With regard to physical facilities, Southworth and Lofthouse (1990) assert that a sound physical environment reflected in school amenities, decorative order and immediate surrounding has a positive advantage to pupil's progress and achievement. A directory of the types of materials that could be found in a typical school prepared by the Population Council and MOEST (1997) include physical facilities e.g. land, school buildings, playground, equipment, means of transport, teaching and learning materials like textbooks, stationery, chalk, dusters etc. The most basic and critical physical facilities in a secondary school are classrooms, laboratories and libraries. The United Nations Children's Fund (UNICEF, 1990) identified poor learning environments deficient of adequate physical facilities in developing countries as one of the leading causative factors in the poor performance of public secondary schools in Kenya. Wamai (1991) established that over enrolment in public secondary schools is usually done with the full knowledge of MOEST. This is done without expanding the physical facilities which then over-stretches the resources and negatively impacts the levels of performance.

The Southern African Consortium for Monitoring Educational Quality (SACMEQ, 1991) carried out a study in Kenya that revealed a critical shortage of textbook and physical facilities in most schools. A MOEST (2003) report on examination performance cites a World Bank study carried out in Kenya that revealed that seventy percent of the schools visited had no libraries and attributes poor examination performance in many schools to this situation. Heyneman and Loxely (1983) found that the presence of a school library related significantly to student achievement in Brazil, China, Botswana and Uganda. Nduru (1993) notes that if the school principal can effectively link the functions of the Board of Governors (BOG) and the Parents Teachers Association (PTA) especially in terms of development, improved performance results. The school principal should endeavor to mobilize the community through the BOG and PTA to extend assistance to the school and ensure that such assistance links up with the curricular activities (Micheka, 1983).

## **CHAPTER THREE: RESEARCH METHODOLOGY**

### **3.1 Introduction**

This chapter sets out various aspects of the study including the research design, target population, data collection instruments, data collection procedures and finally data analysis.

### **3.2 Research Design**

The research was conducted using a census survey. A census was chosen as the small size of the population made it feasible. The varied nature of the schools in terms of gender composition, student aptitude and boarding and other physical facilities also meant a census was appropriate. A survey has was chosen as the respondents were found to be uniquely qualified to provide the desired information given their relatively long experience in the teaching profession (Cooper and Emory, 1995).

### **3.3 Target Population**

The population of interest in this study was all the nineteen public secondary schools in Kiambaa division, Kiambu East District as listed in the register of schools in the district education office. Kiambaa division was selected because of convenience, time and cost constraints.

### **3.4 Data Collection**

The researcher used a self administered questionnaire to collect primary data. The questionnaire had two sections:

Section A- This contained personal and contextual data from the respondent.

Section B- This contained questions directed at capturing data for the objectives of the study using 5 point scales. (See Appendix 2)

The data was collected from secondary school principals, deputy principals and heads of departments. This is because they are the key decision makers in a school and are responsible for shaping its destiny. The questionnaire was administered using the drop and pick later method which is a variation of the mail questionnaire.

### **3.5 Data Analysis**

The data collected was already organizing into themes and concepts and it was then coded for further analysis. Descriptive statistics were used to analyze the data which was then presented in the form of statistical tables.

## CHAPTER FOUR: DATA ANALYSIS AND INTERPRETATION

### 4.1 Introduction

Presented in this chapter are the findings of the data analyzed and interpreted. The data in this chapter was processed thematically. Demographic and contextual data are presented first followed by the findings on the research objectives as given by the different respondents. Descriptive statistics have been used to analyze the findings. Tables arraying the means and standard deviations have been used to present the data on research objectives.

### 4.2 Response rate

Out of 152 questionnaires administered to secondary school principals, deputy principals and heads of departments in Kiambaa division, 120 were completed and returned while 32 questionnaires were not returned. This response rate was 78.9% and a non response rate of 21.9% which is over and above a 50% response rate which is regarded as desirable (Babbie, 1990).

### 4.3 Respondents Demographic Data

The demographics considered suitable in this study were gender, age, teaching experience, job designation, academic qualification, professional qualification and category of school. These findings are presented in Tables 4.1- 4.6.

**Table 4.1: Gender Distribution of Respondents**

	<b>Frequency</b>	<b>Percent</b>
<b>Male</b>	44	36.7
<b>Female</b>	76	63.3
<b>Total</b>	120	100.0

Out of 120 respondents, 44 (36.7%) were male and 76 (63.3%) were female.

**Table 4.2: Distribution by Age**

	<b>Frequency</b>	<b>Percent</b>
<b>25 - 29</b>	1	0.8
<b>30 - 34</b>	2	1.7
<b>35 - 39</b>	44	36.7
<b>40 - 45</b>	47	39.2
<b>45 - 49</b>	18	15.0
<b>50 and above</b>	8	6.7
<b>Total</b>	120	100.0

97.5% of the respondents were 35 years of age and above while those below 35 years of age were only 2.5%.

**Table 4.3: Teaching Experience**

	<b>Frequency</b>	<b>Percent</b>
<b>0 - 4 years</b>	2	1.7
<b>5 - 9 years</b>	3	2.5
<b>10 - 14 years</b>	28	23.3
<b>15 - 19 years</b>	54	45.0
<b>20 - 24 years</b>	25	20.8
<b>25 years and above</b>	8	6.7
<b>Total</b>	120	100.0

95.8% of the respondents had a teaching experience of over ten years while 4.2% had an experience of less than ten years. This is significant because the study was targeting those who have taught in schools long enough to have developed a strong implicit sense of what in the school system is critical to success in examination performance.



**Table 4.4: Respondents Academic and Professional Qualifications**

<b>Academic Qualifications</b>	<b>Frequency</b>	<b>Percent</b>	<b>Professional Qualifications</b>	<b>Frequency</b>	<b>Percent</b>
<b>College Diploma</b>	15	12.5	<b>Diploma in Education</b>	15	12.5
<b>Bachelor's Degree</b>	91	75.8	<b>Bachelor of Education</b>	85	70.8
<b>Masters Degree</b>	14	11.7	<b>Postgraduate Diploma in Education</b>	6	5.0
<b>Total</b>	120	100.0	<b>Masters in Education Degree</b>	14	11.7
			<b>Total</b>	120	100.0

All the respondents were adequately qualified for their jobs both academically and professionally. 11.7% had advanced their professional qualifications beyond a first degree while 12.5% were diploma holders. This is important as it reflects that those teaching and working in administrative capacities were professionally qualified. This confirms the situational analysis of the Kiambu East District education office strategic plan for 2008- 2012 which identifies one of its major strengths as having adequately qualified teaching staff with experience in diverse disciplines.

**Table 4.5: Category of School**

	<b>No of Schools</b>	<b>Percent</b>
<b>Provincial</b>	5	26.3
<b>District</b>	14	73.7
<b>Total</b>	<b>19</b>	<b>100.0</b>

5 (26.3%) of the 19 schools are provincial schools and they are all single gender boarding schools. These schools generally admit students who have performed better in the primary grade examination i.e. KCPE than the district schools. They are also generally considered to be better endowed in terms of facilities and the fact that they all have boarding facilities may be evidence of this. The other 14 (73.3%) schools are district schools which generally admit students with lower KCPE marks. Only 3 of the 14 district schools have boarding facilities while the other 11 are mixed gender day schools.

**Table 4.6: Type of school**

<b>Type of School</b>	<b>No of Schools</b>	<b>No of Respondents</b>	<b>Percentage of Respondents</b>
<b>Girls boarding</b>	5	30	25.0
<b>Girls day</b>	1	8	6.7
<b>Boys boarding</b>	2	20	16.7
<b>Mixed day</b>	11	62	51.7
<b>Total</b>	<b>19</b>	<b>120</b>	<b>100.0</b>

There is no mixed day school or boys' boarding school in the division. One of the schools that has always operated as a mixed boarding school is in the advanced stages of phasing out the boys so as to be a purely girls boarding school by next year and thus has been categorized as such in this study. About half of the respondents (51.7%) are from mixed day schools, while 41.7% are from single gender boarding schools. This is of significance because different categories and types of schools each present with significantly different sets of dynamics which introduces intervening and moderating variables which may have a bearing on the respondent's views on success factors as well as the success factors that were present in the different schools.

#### **4.4. Critical Success Factors**

The first objective of the research was to determine the critical success factors that count for good performance in KCSE by public secondary schools in Kiambaa division. The respondents were asked to rate each factor in terms of its contribution to a school's good performance in KCSE using a five point scale ranging from extremely important (5) to not important at all (1). The means and standard deviations for each success factor are shown in Table 4.7 below.

**Table 4.7: Mean and Standard Deviation of Teacher's Rating of Each Success Factor**

	<b>Success Factors</b>	<b>Mean</b>	<b>Std Dev</b>
i	High standards of discipline by students	<b>4.86</b>	<b>0.37</b>
ii	Commitment and dedication to the job	<b>4.74</b>	<b>0.53</b>
iii	Proper time management in school	<b>4.73</b>	<b>0.50</b>
iv	Collaborative and supportive leadership style	<b>4.64</b>	<b>0.58</b>
v	High standards of discipline by staff	<b>4.63</b>	<b>0.59</b>
vi	Text books	<b>4.56</b>	<b>0.71</b>
vii	Training students on study skills	<b>4.54</b>	<b>0.59</b>
viii	Laboratory equipment and chemicals	<b>4.53</b>	<b>0.63</b>
ix	Frequent and open communication between parents, teachers and school	<b>4.48</b>	<b>0.63</b>
x	Teaching methods employed/ instructional strategies	<b>4.45</b>	<b>0.75</b>
xi	Proper supervision of the curriculum	<b>4.44</b>	<b>0.67</b>
xii	Strictly enforced school rules and regulations	<b>4.36</b>	<b>0.76</b>
xiii	Programs to motivate teachers	<b>4.35</b>	<b>0.63</b>
xiv	Teacher qualifications	<b>4.33</b>	<b>0.75</b>
xv	Frequent and continuous testing	<b>4.32</b>	<b>0.67</b>
xvi	Goal/ target setting at all levels	<b>4.32</b>	<b>0.73</b>
xvii	Programs to motivate students	<b>4.29</b>	<b>0.64</b>
xviii	Frequent feedback to students on test scores and analysis	<b>4.26</b>	<b>0.69</b>

	<b>Success Factors</b>	<b>Mean</b>	<b>Std Dev</b>
xix	Programs addressing students negative attitudes towards subjects, teachers e.t.c.	<b>4.25</b>	<b>0.76</b>
xx	Role modeling in teaching	<b>4.24</b>	<b>0.76</b>
xxi	A sense of shared vision and mission by all key stake holders	<b>4.17</b>	<b>0.83</b>
xxii	Thorough and detailed analysis of test scores	<b>4.12</b>	<b>0.63</b>
xxiii	High quality and sustained induction and professional development programs	<b>4.08</b>	<b>0.85</b>
xxiv	School facilitates and provides information on effective parenting	<b>3.97</b>	<b>0.77</b>
xxv	Clear articulation of school vision, mission and goals	<b>3.88</b>	<b>0.95</b>
xxvi	Orientation programs for new students	<b>3.85</b>	<b>0.86</b>
xxvii	Teachers charismatic personality	<b>3.73</b>	<b>0.93</b>
xxviii	Presence of student counsels/ parliaments	<b>3.58</b>	<b>0.86</b>
xxix	Number of years of experience	<b>3.48</b>	<b>0.89</b>
xxx	Technological resources e.g. computer hardware and software for use as teaching aids	<b>3.23</b>	<b>0.82</b>

Of the thirty success factors investigated, respondents deemed eight factors as extremely important and they scored a mean of between 4.5 and 5. Consequently, the following factors emerged as the most critical for success: high standards of discipline by students (4.86); commitment and dedication to the job (4.74); proper time management in school (4.73); collaborative and supportive leadership style (4.64); high standards of discipline by staff (4.63); text books (4.56); training students on study skills (4.54); laboratory equipment and chemicals (4.53).

The other twenty success factors were deemed very important while two were considered important i.e. teaching experience and technological resources e.g. computer hardware and soft ware for use as teaching aids. Of all the factors investigated, none was considered a little important or not important at all.

#### **4.5 Performance Improvement Strategies Adopted in Schools**

The second objective of the study was to determine whether the schools base their success strategies on the critical success factors. Various statements that reflected the extent to which a school had embraced each of the identified success factors in its performance improvement strategies, programs, activities and priorities were listed. The respondents were asked to indicate the extent to which they agreed or disagreed with each statement using a five point scale ranging from strongly agree (5) to strongly disagree (1). The means and standard deviations for strategies addressing specific success factors are shown in Table 4.8 below.

**Table 4.8: Mean Distribution of Performance Improvement Strategies Based on Various Success Factors**

	<b>Performance Improvement Strategies</b>	<b>Mean</b>	<b>Std Dev</b>
i	The school prioritizes provision of adequate of text books	<b>4.48</b>	<b>0.77</b>
ii	There is frequent and continuous testing	<b>4.39</b>	<b>0.69</b>
iii	The school values and ensures high standards of discipline by students	<b>4.33</b>	<b>0.83</b>
iv	The school prioritizes provision laboratory equipment and chemicals	<b>4.28</b>	<b>0.82</b>
v	There is emphasis on proper supervision of the curriculum	<b>4.24</b>	<b>0.70</b>
vi	The school values and ensures a high standards of discipline by staff	<b>4.20</b>	<b>0.71</b>

	<b>Performance Improvement Strategies</b>	<b>Mean</b>	<b>Std Dev</b>
vii	Frequent and open communication between parents, teachers and school administration on students progress is valued and carried out	<b>4.09</b>	<b>0.77</b>
viii	Proper time management in school is valued and carried out	<b>4.08</b>	<b>0.85</b>
ix	There is frequent feedback to students on test scores and analysis	<b>4.08</b>	<b>0.83</b>
x	Collaborative and supportive leadership style is valued and practiced	<b>4.05</b>	<b>0.89</b>
xi	Thorough and detailed analysis of test scores is valued and carried out	<b>4.03</b>	<b>0.84</b>
xii	There is strictly enforcement of school rules and regulations	<b>4.00</b>	<b>0.71</b>
xiii	The administration strives to creating a sense of shared vision and mission by all key stake holders	<b>3.90</b>	<b>0.95</b>
xiv	Programs to motivate students are valued and carried out	<b>3.98</b>	<b>0.90</b>
xv	The school supports educators learning of diverse teaching methods to help diverse students succeed	<b>3.93</b>	<b>0.82</b>
xvi	The school administration (principals, deputies and heads of departments) act as good role models in teaching	<b>3.92</b>	<b>0.94</b>
xvii	The school staff participates in high quality and sustained induction and professional development programs	<b>3.84</b>	<b>0.89</b>
xviii	Training students on study skills is valued and carried out	<b>3.86</b>	<b>0.93</b>
xix	Goal/ target setting at all levels is valued and carried out	<b>3.81</b>	<b>0.90</b>
xx	There is clear articulation of school vision and mission	<b>3.78</b>	<b>0.97</b>
xxi	Programs addressing students negative attitudes towards subjects, teachers e.t.c. are valued and carried out	<b>3.77</b>	<b>0.91</b>
xxii	There are student counsels/ parliaments	<b>3.61</b>	<b>1.02</b>
xxiii	There are intensive orientation programs for new students	<b>3.58</b>	<b>1.11</b>
xxiv	Programs to motivate teachers are valued and carried out	<b>3.51</b>	<b>0.99</b>

	<b>Performance Improvement Strategies</b>	<b>Mean</b>	<b>Std Dev</b>
xxv	The school facilitates and provides information on effective parenting	<b>3.38</b>	<b>1.02</b>
xxvi	The school prioritizes provision technological resources e.g. computer hardware and soft ware for use as teaching aids	<b>3.07</b>	<b>1.19</b>

Respondents agreed that 24 of 26 success factors investigated were addressed by the school strategies. The eight areas that received the most attention were: provision of adequate text books; frequent and continuous testing; high standards of discipline by students; provision of laboratory chemicals and equipment; proper supervision of the curriculum; high standards of discipline by staff; frequent and open communication between parents, teachers and school administration on students' progress; proper time management.

However, no factor scored a mean of 4.5 and above implying that generally, there were no specific factors that were accorded special and continuous attention. Even for those success factors rated as extremely important to ensuring operational, managerial and organizational success denoted by high performance, there no corresponding response by the respondents that strongly agreed that the schools treated them as such. On the last two factors in Table 4.8 above, the respondents were neutral as to whether the school had strategic objectives to address them.

#### **4.6 Critical Success Factors and Performance Improvement Strategies Adopted in Schools**

To determine if schools based their performance strategies on success factors, the rank of each factor was compared to the rank given to the priority it was accorded in terms of performance improvement strategies. Four success factors that were external CSFs were not related to any strategy for comparison. These were teacher commitment and dedication to the job, teachers' charismatic personality, teacher qualifications and

teachers' number of years of experience. Job commitment and dedication and teacher charisma were assumed to be beyond the significant control of the school administration. The school administration also did not have direct control over teacher qualifications and experience as the government posted teachers it regarded as qualified to the schools without considering the amount of teaching experience except for administrative posts. However, the criticality of these factors was still investigated to establish how important they were to a school's success.

**Table 4.9: Comparison of Success Factor Criticality Ranking and Priorities Addressed by Performance Improvement Strategies in Schools**

Success Factor(SF)	Ranking in Terms of Importance		Means	
	SF Criticality Ranking	Strategy area priority ranking	SF Mean	Strategy Mean
High standards of discipline by students	1	3	4.86	4.33
Commitment and dedication to the job		N/A	4.74	N/A
Proper time management in school	2	8	4.73	4.08
Collaborative and supportive leadership style	3	10	4.64	4.05
High standards of discipline by staff	4	6	4.63	4.20
Text books	5	1	4.56	4.48
Training students on study skills	6	18	4.54	3.86
Laboratory equipment and chemicals	7	4	4.53	4.28



Success Factor(SF)	Ranking in Terms of Importance		Means	
	SF Criticality Ranking	Strategy area priority ranking	SF Mean	Strategy Mean
Frequent and open communication between parents, teachers and school administration on students progress	8	7	4.48	4.09
Teaching methods employed/ instructional strategies	9	15	4.45	3.93
Proper supervision of the curriculum	10	5	4.44	4.24
Strictly enforced school rules and regulations	11	12	4.36	4.00
Programs to motivate teachers	12	24	4.35	3.51
Frequent and continuous testing	13	2	4.32	4.39
Goal/ target setting at all levels	14	19	4.32	3.81
Programs to motivate students	15	14	4.29	3.98
Frequent feedback to students on test scores and analysis	16	9	4.26	4.08
Programs addressing students negative attitudes towards subjects, teachers e.t.c.	17	21	4.25	3.77
Role modeling in teaching	18	16	4.24	3.92
A sense of shared vision and mission by all key stake holders	19	13	4.17	3.90

Success Factor(SF)	Ranking in Terms of Importance		Means	
	SF Criticality Ranking	Strategy area priority ranking	SF Mean	Strategy Mean
Thorough and detailed analysis of test scores	20	11	4.12	4.03
High quality and sustained induction and professional development programs	21	17	4.08	3.84
School facilitates and provides information on effective parenting	22	25	3.97	3.38
Clear articulation of school vision, mission and goals	23	20	3.88	3.78
Orientation programs for new students	24	23	3.85	3.58
Teachers charismatic personality		N/A	3.73	N/A
Presence of student counsels/parliaments	25	22	3.58	3.61
Number of years of experience		N/A	3.48	N/A
Technological resources for use as teaching aids	26	26	3.23	3.07

From the analysis above, it is evident that success strategies given high priority in schools were somewhat based on the critical success factors. With the exception of job commitment and dedication which emerged as a CSF albeit an external one, the remaining seven CSFs were compared with the seven areas that received the highest priority in the schools. It was apparent that the CSFs were not fully or adequately addressed because school administrators were first and foremost committed to addressing four of these seven CSFs. These were high standards of discipline by students, provision

of adequate text books, provision of laboratory chemicals and equipment and high standards of discipline by staff. The school administrators also focused primarily on frequent and continuous testing and proper supervision of the curriculum at the expense of more critical factors such as proper time management, collaborative and supportive leadership and training students on study skills.

On one CSF a glaring inconsistency was noted in that despite training students on study skills being ranked as extremely important to success, it was ranked as the eighteenth priority area in schools. The other two CSFs i.e. proper time management and collaborative and supportive leadership were accorded eight and tenth priority respectively by schools. Schools prioritized frequent and continuous testing and proper supervision of the curriculum as one of the top seven areas to focus on but they were ranked tenth and thirteenth respectively in terms of their potential contribution to success. Other conspicuous inconsistencies between what was really important and what schools deemed as important were evident in four areas. Schools failed to prioritize and adequately address themselves to the teaching methods employed and teacher motivation programs. The schools also appeared to erroneously lay excessive and unnecessary importance on thorough and detailed analysis of test scores and frequent feedback to students on test scores and analysis.

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

The purpose of this chapter is to provide an interpretive discussion of the findings of the study and to relate them to the objectives of the study, and the literature review. In this chapter, limitations of the study will also be outlined, suggestions for further research highlighted and implications for policy and practice given.

### **5.1 Summary, Discussions and Conclusions**

The first objective of the research was to determine the critical success factors that count for good performance in KCSE by public secondary schools in Kiambaa division. In this respect, the study showed that the eight factors that are critical for success are: high standards of discipline by students; commitment and dedication to the job; proper time management in school; collaborative and supportive leadership style; high standards of discipline by staff; text books; training students on study skills; laboratory equipment and chemicals. The study investigated thirty success factors in total of which two were rated as important, twenty were rated as very important and eight were found to be of extreme and critical importance. These findings are consistent with Parr and Shanks (2000) contention that while CSFs are not sufficient on their own to ensure a successful outcome, they are necessary to achieve success. These findings also support Boyton and Zmud (1984) who argued that CSFs are typically twenty percent of the total factors that determine eighty percent of the business unit's performance and as such they need special and continuous attention to ensure operational, managerial and organizational success denoted by high performance.

The CSFs that emerged from the study confirmed the assertions of Eshiwani (1983) and Duignan (1986) who contend that good performance in school is relatively equated to good administration and that schools that consistently perform well tend to have sound and efficient administrators. It also confirms some of the CSF's outlined in the Kiambu East District education office strategic plan for 2008-2012 which outlines enhanced commitment and dedication by education officials, school principals and teachers; prudent time management; improved school discipline and effective leadership at all

levels as some of the eight critical success factors that must be addressed if the district office is to realize and sustain its goal of quality education in the district. The study shed some light on the findings of Rivkin, Hanushek, and Kain (1998) cited by Mayer et al (2000) who found that the most significant source of learner achievement variation is teacher quality. Their research data sets however did not contain enough information to allow them to explain what exactly made one teacher more or less effective than another. This study established that of all the aspects of teacher quality investigated, the only one that was extremely important and critical was commitment and dedication to the job. On teacher quality this study established that teaching experience was important while instructional strategies employed, teacher qualifications, and professional development programs attended were very important to teacher effectiveness.

These findings partly agree with Waweru (1982) who found that teachers experience and commitment to students learning emerge as key characteristics to successful learning and achievement. Wamai (1991) established that the academic qualifications of teachers and availability of teaching learning resources were the most important factors that determined achievement of learners. In as much as academic qualifications of teachers were deemed important by this study, teaching learning resources and in particular text books and laboratory equipment and chemicals were found to bear critical importance. This is consistent with the findings of Heymanman (1975) cited in a World Bank report (1995) who is quoted as having made the assertion that “from the evidence we have so far, the availability of text books appears to be the single most factor in predicting academic achievement”. This assertion is also consistent with the CSF that schools accord the highest priority as per the findings of this study i.e. provision of text books. This study also confirms that CSFs evolve with time as per Thompson et al (2007) assertions and in terms of criticality ranking, the importance of availability of text books noted by Heymanman following a 1975 study as the single most important determinant of learner achievement has been superseded by high standards of discipline as the most important determinant of learner achievement today.

Based on the foregoing discussion, it can be concluded that the issues underlying underperformance of schools in the division were based on the failure of schools to ensure consistently high performance in these eight critical areas. Carelli et al (2004) assert that doing this is very important if any organization is to achieve its goals and consequently accomplish its mission. For underperformance to be successfully addressed, the schools needed to ensure that resources and efforts were concentrated on those factors that were capable of providing the greatest competitive leverage and this study brought these factors to light. As the essence of the CSF approach to management is what CSF commentators refer to as “focused specialization”, it can be concluded that one of the major causes of underperformance in schools was because school administrators undermined their chances of success by failing to take cognizance of the CSF areas to ensure that they consistently performed well in them. It can also be concluded that failure to consistently and continuously pay very high attention to the issues of indiscipline in many schools could be one of the leading causes of underperformance in the division.

The second objective of the study was to determine whether the schools base their success strategies on the critical success factors. The study established that the success strategies given high priority in schools were only somewhat based on the critical success factors. Critical success factor areas were not adequately addressed because although schools primarily focused on four of these seven CSFs i.e. provision of adequate text books, high standards of discipline by students, provision of laboratory chemicals and equipment and high standards of discipline by staff, they failed to focus appropriately on proper time management, collaborative and supportive leadership and training students on study skills. The schools also paid more attention to less critical issues i.e. frequent and continuous testing and proper supervision of the curriculum. The study also established that neither those factors rated as extremely important to ensuring organizational success nor any other specific factors were accorded exceptionally high and continuous attention. The study also established that apart from the CSF areas, schools appeared to focus too much on thorough and detailed analysis of test scores and frequent feedback to students on test scores and analysis while failing to adequately focus

on teaching methods employed and teacher motivation programs which were found to have a bigger impact on the potential for success.

This study confirms the observation by many CSF commentators that most managers are generally intuitively aware of the variables they must manage to be successful but may be unable to clearly and concisely articulate them or appreciate their importance. This explains why there is a measure of consistency between four of the eight CSFs and the areas that school administrators prioritize. The findings of the study are also support the view of many CSF commentators who observe that often misdirected strategy is as a result of failure to explicitly identify and implement CSFs. This study found evidence of misdirected strategy in that some of the key areas of activity in schools receiving the most attention from administrators are not are not consistent with those areas found to have the greatest bearing on success. As Miller (1984) observes, formally identified and explicitly stated CSFs implicitly communicate top management priorities and thereby direct organizational efforts in the desired direction and provide a framework against which they can make priorities and assumptions. This study established that “Operation Effective 40” a strategy being implemented in the schools under the direction of the provincial education office whose principal aim is to ensure that schools achieve a significant increase in quality grades in examinations was not misdirected. The strategy was largely on target as at least three of its six pillars addressed CSF areas while the other three pillars addressed the areas that were ranked by respondents as bearing very high importance in achieving good performance.

From the forerunning discussion four main conclusions can be drawn. It can be concluded that one of the major reasons for underperformance in schools in the division is the failure of administrators to fully identify and adequately address themselves to the key areas of activities that should receive their constant and careful attention. In as much as the academic standards in schools within the division are deficient and mean grades oscillate around a C<sup>-</sup> which the KNEC appraises as an average performance, it is not dismal. As such, it can be concluded that school administrators are intuitively aware of some of the things they should do to ensure that they perform well and they actually

address CSFs albeit inadequately. If school administrators totally disregarded CSF areas, then it was possible that the divisions' KCSE mean scores would be much lower i.e. D or D<sup>-</sup> which KNEC appraises as a weak performance or even an E mean score which KNEC appraises as a poor performance as it depicts total failure. It can also be concluded that the schools in the division were not performing at their best possible potential and there was room for improvement which could be achieved if the administrators ensured that they use CSFs as a means to focus and validate many of the important activities they perform so that there is no mismatch between the activities and programs they gave optimal priority and what was truly of critical importance. It can also be concluded that "Operation Effective 40" which was being touted as a "miracle cure for academic malnutrition in the province" provided a potent approach to solving issues of underperformance in the division and province as a whole.

## **5.2 Limitations of the Study**

In as much as the study was a census survey, the research was limited because the census was based on only public schools in one geographical area i.e. Kiambaa division. A census was carried out because within the division the schools were few enough to allow for a census. However, for the study to have wider applicability and have more generalizability the study area could have been enlarged and private secondary schools included. However, due to resource constraints, this was not possible. As a result, the findings of the study may not be applicable to all secondary schools across the country or to private secondary schools.

Due to resource constraints the study was more explorative. This was limiting in itself and a more analytical and predictive approach where a comparison between "winning" versus "losing" schools in terms of KCSE performance may have borne more in-depth information on the CSFs that distinguish those schools that perform very well from those that do not.



### **5.3 Suggestions for Further Research**

There is a need to replicate this study in other divisions, districts and provinces in order to validate its claims as well as ascertain the reliability of the findings. Replicating this study in private secondary schools would help to establish if CSFs for private schools are similar to those of public schools. There is a need for further research to establish if there is any significant variation between CSFs for different categories and types of schools e.g. national schools, provincial schools and district schools; boarding schools and day schools; mixed schools and single gender schools.

There is need for more in-depth research to determine the extent to which top performing schools in Kenya base their success strategies on CSFs and the extent to which CSFs account for this excellence in performance. There is a need to establish external CSFs in KCSE performance as these will guide school administrators on the areas to monitor so as to minimize any negative impact on operations that may result because the CSF is not in his or her direct control.

### **5.4 Implications for Policy and Practice**

Policy makers ought to review the policies on education management to ensure that they reflect the information on CSFs to a much greater extent. This will ensure that schools are not forced to give very high priority to activities and programmes that are not critical to success so as to be policy compliant, at the expense of other activities which are critical to success. Policy makers should also endeavor to get clearer definition of success factors for the schools, the ideal organization performance in relation to them, and then ensure explicit communication of these factors to all appropriate levels of management in a structured manner. Quality and standards assurance officers in playing their watchdog and advisory role in schools should use this information on CSFs to design an effective performance measurement and control system in schools.

Policy makers and schools administrators should endeavor to ensure that they pay exceptionally high and continuous attention to issues revolving around students discipline as this has been identified as one of the biggest challenge and cause of underperformance

in many schools yet it is the factor that was rated as the most critical to success. School administrators should think through moves that ensure this CSF is covered come up with creative approaches to create or enhance a school culture that embraces self-discipline at its core. School administrators should also give these CSFs a good deal of analysis and insight and then come up with actionable items even where it means re-evaluating their strategic priorities and agenda in light of the findings and where necessary, rework their strategic plans to reflect the importance of these areas to success.

## REFERENCES

Alejandra, M. and Pilar R. (2002), School Performance and Choice: The Chilean Experience, *The Journal of Human Resources*, Vol. 35, No. 2, pp. 392-417.

Ansoff, I., and Mc Donnell, E. (1990), *Implanting Strategic Management 2<sup>nd</sup> Edition*, London: Prentice Hall.

Atkinson GBJ (1987), *The Economics of Education*, London: Hodder and Stoughton Educational.

Babbie, E (1990), *The Practice of Social Research*, California: Wadsworth Publishing Company.

Bali S.K., Drench P.J., Flier H.V., Young W.C. (1984), *Contribution of Aptitude Test to Prediction of School Performance in Kenya: A Longitudinal Study*, Lisse: Swets and Zeitlinger

Bloom B. S. (1956), *Taxonomy of Educational Objectives, Handbook I: The Cognitive Domain*, New York: David McKay Co Inc.

Boyton A.C. and Zmud R.W. (1984), "An Assessment of the Critical Success Factors", *Sloan Management Review*, Volume 25, No.4, pp. 17

Bullen C.V and Rockart J.F. (1981), *A Primer On Critical Success Factors Center For Systems Research*, Sloan Management Centre, MIT: Cambridge Massachusetts

Caralli, R. A. et al. (2004), *The Critical Success Factor Method: Establishing a Foundation for Enterprise, Technical Report*, Carnegie: Mellon University.

Coleman, J. S., Campbell E.Q., Hobson C.J., McPartland J., Mood A.M., Weinfeld F.D., York R.L. (1966), *Equality of Educational Opportunity*, Washington, DC: U.S: Government Printing Office.

Cooper, D. R., and Emory, C. W. (1995), *Business Research Methods (5<sup>th</sup> edition)*, Chicago: IL: Irwin.

Daniel, D. Ronald, (1961), "Management Information Crisis", *Harvard Business Review*, Vol. 39, No. 5, September/October, pp. 111-121

DFEE (1997), *White Paper: Excellence in Schools*, London: HMSO.

Dickinson, R. A., Ferguson, C. R., Sircar S., (1984), Critical Success Factors and Small Business, *American Journal of Small Business*, Vol. 8, No. 3, Jan.-Mar, pp. 45-52

Dobbins, J. H., & Donnelly, R. G. (1998), "Summary Research Report on Critical Success Factors in Federal Government Program Management", *Acquisition Review Quarterly* Vol. 5, No.1

Douglas, J. (1984), *The Home School*, London: Mac. Gibbon and Kee

Duignan, R. Research on Effective Schooling; Some Implications for Improvement, *Journal of Educational Administration*, Volume 24, (1986), Research on Effective Schooling; Some Implications for Improvement, *Journal of Educational Administration*, Volume 24, No 1. Pp 59-73

Eshiwani G.S. (1983), *Factors Influencing Performance among Primary and Secondary School Pupils in Western Province of Kenya: A Policy Study*, Nairobi: Bureau of Education Research, Kenyatta University College

Eshiwani G.S. (1988), *Education in Semi-Arid Areas: A Study of Determinants for School Achievement in Kajiado District*, Unpublished Study, Nairobi: Bureau of Education Research, Kenyatta University

Eshiwani GS (1993), *Education in Kenya Since Independence*, Nairobi: Government Printer

Flynn N (1996), *Public Sector Management, 1<sup>st</sup> Edition*, New York: Prentice Hall

Ghemawat, P (1991), *Commitment: The Dynamic of Strategy*; New York: Free Press

Griffith, J. (1996), Relation of Parental Involvement, Empowerment, and School Traits to Student Academic Performance. *Journal of Educational Research*, Vol 90, pp. 33-41

Grunert, K.G., Ellegaard, C. (1993), "The concept of key success factors: theory and method", in Baker, M.J. (Eds), *Perspectives on Marketing Management*, Vol. 3 pp.245-74.

Hellinger P and Heck R (1995), *Exploring the Principal's Contribution to School Effectiveness*, Boston: Green Field Allyn and Bacon,

Heyneman S and Loxely W (1983), The Effects of Primary School Quality on Academic Achievement Across Twenty Nine High Schools and Low Income Countries, *American Journal Of Sociology*, Vol. 8, pp. 1162 - 1194

Indongole M.J.P. (1987), *Factors Affecting Performance of Candidates in Public Examinations: A Review of Research*, University of Lancaster, Cartmel College: Department of Education Research

Jenster P.V. (1987), "Using Critical Success Factors in Planning", *Long Range Planning*, Vol. 20, No.4, pp. 102-108

Johnson, G., Scholes, K. (1999), *Exploring Corporate Strategy (5<sup>th</sup> Edition)*, Europe: Prentice Hall.

Kiambu East District Education Office (2009), *Strategic Plan: 2008-2012*, Kiambu East District Education Board

Leidecker, J.K. and Bruno, A.V. (1984), "Identifying and Using Critical Success Factors" *Long Range Planning (UK)*, Vol. 17, pp. 23-32

Levine, D. U., and L. W. Lezotte (1990), *Unusually Effective Schools: A Review and Analysis of Research and Practice*, Madison, WI: National Center for Effective Schools Research and Development.

Mayer, Daniel P; Mullens, John E; Moore, Mary T; Ralph, John (2000), *Monitoring School Quality: An Indicators Report*, U.S. Department of Education: National Center for Education Statistics, Washington, DC:

Micheka E (1983), *An Investigation of the Cause of Pupil Drop Out In Primary Schools in Kisii District*, Unpublished PGDE Project, University of Nairobi

Ministry of Education, Science and Technology (2003), *Report of Sector Review and Development*, Government Printer, Nairobi

Ministry of Planning and National Development (2008), *Kenya Vision 2030, The Popular Version*, Government of the Republic of Kenya

Mugambi, M. (2006), *Factors Influencing Students Performance in Kenya Certificate Of Secondary Education (KCSE) Examinations in Meru South District, Kenya*, Unpublished M.Ed Thesis, University Of Nairobi

Murphy, J. (1992), *Effective Schools: Legacy and Future Directions, School Effectiveness: Research, Policy and Practice*, London: Cassell

Ndiritu W A (1999), *A Study of Factors Which Influence Performance of KCSE in Selected Secondary Schools in Nairobi and Central Provinces, Kenya*, Unpublished M.Ed Research, University of Nairobi

Ohmae, K. (1982), *The Mind Of A Strategist*, New York: Mc Graw Hill Inc.

Ongiri, I., Abdi, A. (2004), "Hard Work is the Secret of Success", *The Standard, 21st March* , Pg. 5. Nairobi: Kenya

Parr A and Shanks G (2002), A Model of ERP Implementation, *Journal of Information Technology, Vol 14. No.4*, pp. 289-304

Poister T.H and Streib G. D (1999), Strategic Management in the Public Sector, *Public Productivity and Management Review, Volume 22. No. 3*, pp. 308-325

Population Council and Republic of Kenya (1997), *Schooling Experience of Adolescent Girls in Kenya*, Nairobi: Government Printer,

Republic of Kenya (1998), *Master Plan on Education and Training; 1997-2010*, Nairobi: Government Printer.

Robson, Wendy (1997), *Strategic Management and Information Systems- Second Edition*, New York: Prentice Hall

Rockhart, John F. (1979), "Chief Executives Define Their Own Data Needs", *Harvard Business Review*, Vol. 57, No. 2, March/April, pp. 238-241

Rockhart, J.F., & Bullen, C.V. (1981), *A Primer on Critical Success Factors*, Cambridge, MA: Center for Information Systems Research, Massachusetts Institute of Technology

Rose, A., and Lawton, A. (1997), *Public Sector Management, 1<sup>st</sup> Edition*, New York: Prentice Hall

Rutter M, Maugham B, Mortimer P, Smith A (1979), *Fifteen Thousand Hours in Secondary Schools and their Effects on Children*, Cambridge and Harvard Universities U.S.A.

Southworth G and Lefthouse B (1990), *The Study of Primary Education: A Source Book, Vol 2*, School Organization and Management, London: The Falmer Press

Smith J and Tomlison A (1989), *The School Effect*, Policy Studies Institute, London: Marston Book Services Limited, Oxford University State

Teachers Service Commission (2006), *Teacher Image, Vol 11*

Thompson, Strickland, Gamble (2007), *Crafting and Executing Strategy, 15<sup>th</sup> Ed.*, New York: McGraw-Hill Int. Edition

UNICEF (1990), *The Girl Child: An Investment In The Future*, New York

Wamai, M. (1991), *Scratching the Surface: Results Of The First Secondary Examination Under The New Curriculum In Kenya*, Unpublished M.Ed Thesis, School Of Education, University Of Leeds



Waweru, J.M. (1982), *Social-Economic Background as an Influence in Pupils Achievement in Primary Schools in Embu District*, Unpublished M.Ed Thesis, University Of Nairobi

Wekesa, G.W. (1993), *“The Impacts of Head-teachers’ Instructional Leadership on Student Academic Achievement in Kenya”*, Unpublished Ph.D. Dissertation, Teachers College, Columbia University.

Wiseman, S. (1968), *Education and Environment*, Manchester University Press

World Bank (1987), *School and Class Room Effects on Students Learning In Thailand*, Washington D.C.

## APPENDICES

### Appendix 1: Introduction Letter

Sylvia N. Icharia,  
University Of Nairobi,  
Faculty of Commerce,  
Department of Business Administration,  
P.O.BOX 30197- 00100  
Nairobi.

Dear Respondent,

#### **RE: INTRODUCTION LETTER**

I am a postgraduate student in the School of Business, University of Nairobi, pursuing a Masters in Business Administration (MBA) degree programme. I am undertaking a management research project: **Critical Success Factors in KCSE Examinations in Public Secondary Schools in Kiambaa Division.**

You have been selected as one of the respondents. I am therefore requesting that you fill the questionnaire to the best of your knowledge. The information that you give is purely for academic research purposes and will therefore be treated with strict confidence. In no way will your name or the name of your school appear in the final report.

A copy of the final report will be made available to you upon request.

Thank you for your valuable cooperation.

Yours Faithfully,

S.N.Icharia

**Appendix 2: Questionnaire**

**Section A: Personal and Contextual Data**

Please provide the following information

1. Your gender (tick): Male (  ) Female (  )
  
2. Your age (tick): Below 25 (  ) 25-29 (  ) 30-34 (  ) 35-39 (  ) 40-45 (  )  
45-49(  ) 50 and above (  )
  
3. How long have you been teaching? (Count the present year as a full year)  
0-4(  ) 5-9(  ) 10-14(  ) 15-19(  ) 20-24(  )  
25 and above (  )
  
4. Your current designation (tick): Principal (  ) Deputy Principal (  )  
Head of Department (  )  
For Heads of Departments, specify department (optional)

.....

4. Your major teaching subjects.....

5. Indicate all the educational qualifications you have attained

(i) Academic qualification

- a) College diploma (  )
- b) Bachelors degree (  )
- c) Masters degree (  )
- d) Any other (specify).....

(ii) Professional qualification

- a) Diploma in Education (  )
- b) Bachelor of Education (  )
- c) Postgraduate diploma in Education (  )
- d) Masters in Education (  )
- e) Any other (specify).....

6. Category of your school (tick any one option in and any other option from b-c)

- a) Provincial ( ) or District ( )
- b) Girls boarding ( )
- c) Boys boarding ( )
- d) Mixed boarding ( )
- e) Girls day ( )
- f) Boys day ( )
- g) Mixed day ( )

**Section B: Critical Success Factors**

Indicate how you rate each factor below in terms of its contribution to a school’s good performance in KCSE examinations.

**N.B: 5-Extremely Important**

**2- A Little Important**

**4- Very Important**

**1- Not Important At All**

**3- Important**

<b>1</b>	<b>Aspects of teacher characteristics</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
a	Teacher qualifications					
b	Number of years of experience					
c	Commitment and dedication to the job					
d	Teaching methods employed/ instructional strategies					
e	High quality and sustained induction and professional development programs					
f	Teachers charismatic personality					
<b>2</b>	<b>Teaching and learning resources</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
a	Text books					
b	Laboratory equipment and chemicals					
c	Technological resources e.g. computer hardware and soft ware for use as teaching aids					
<b>3</b>	<b>Aspects of school administration</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
a	Collaborative and supportive leadership style					
b	Proper supervision of the curriculum					

<b>3</b>	<b>Aspects of school administration (continued)</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
c	Role modeling in teaching					
d	Clear articulation of school vision, mission and goals					
e	A sense of shared vision and mission by all key stake holders					
<b>4</b>	<b>Aspects of the school environment in terms of orderliness and safety</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
a	High standards of discipline by students					
b	High standards of discipline by staff					
c	Strictly enforced school rules and regulations					
d	Presence of student counsels/ parliaments					
e	Orientation programs for new students					
<b>5</b>	<b>School climate in terms of expectations</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
a	Programs addressing students negative attitudes towards subjects, teachers e.t.c.					
b	Programs to motivate students					
c	Programs to motivate teachers					
d	Goal/ target setting at all levels					
<b>6</b>	<b>Frequent monitoring of student progress</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
a	Frequent and continuous testing					
b	Thorough and detailed analysis of test scores					
c	Frequent feedback to students on test scores and analysis					
<b>7</b>	<b>Positive home-school relations</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
a	Frequent and open communication between parents, teachers and school administration on students progress					
b	School facilitates and provides information on effective parenting					
<b>8</b>	<b>Opportunity to learn and time on task</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
a	Proper time management in school					
b	Training students on study skills					

Indicate the extent to which you agree or disagree with each statement below with regard to your school.

<b>1</b>	<b>Aspects of teacher characteristics</b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Neutral</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
a	The school supports educators learning of diverse teaching methods to help diverse students succeed					
b	The school staff participates in high quality and sustained induction and professional development programs					
<b>2</b>	<b>Teaching and learning resources</b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Neutral</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
a	The school prioritizes provision of adequate of text books					
b	The school prioritizes provision laboratory equipment and chemicals					
c	The school prioritizes provision technological resources e.g. computer hardware and soft ware for use as teaching aids					
<b>3</b>	<b>Aspects of school administration</b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Neutral</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
a	Collaborative and supportive leadership style is valued and practiced					
b	There is emphasis on proper supervision of the curriculum					
c	The school administration (principals and heads of departments) act as good role models in teaching					

<b>3</b>	<b>Aspects of school administration(continued)</b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Neutral</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
d	There is clear articulation of school vision and mission					
e	The administration strives to creating a sense of shared vision and mission by all key stake holders					
<b>4</b>	<b>Aspects of the school environment in terms of orderliness and safety</b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Neutral</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
a	The school values and ensures high standards of discipline by students					
b	The school values and ensures a high standards of discipline by staff					
c	There is strictly enforcement of school rules and regulations					
d	There are student counsels/ parliaments					
e	There are intensive orientation programs for new students					
<b>5</b>	<b>School climate in terms of expectations</b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Neutral</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
a	Programs addressing students negative attitudes towards subjects, teachers e.t.c. are valued and carried out					
b	Programs to motivate students are valued and carried out					
c	Programs to motivate teachers are valued and carried out					

<b>5</b>	<b>School climate in terms of expectations (continued)</b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Neutral</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
d	Goal/ target setting at all levels is valued and carried out					
<b>6</b>	<b>Frequent monitoring of student progress</b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Neutral</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
a	There is frequent and continuous testing					
b	Thorough and detailed analysis of test scores is valued and carried out					
c	There is frequent feedback to students on test scores and analysis					
<b>7</b>	<b>Positive home-school relations</b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Neutral</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
a	Frequent and open communication between parents, teachers and school administration on students progress is valued and carried out					
b	The school facilitates and provides information on effective parenting					
<b>8</b>	<b>Opportunity to learn and time on task</b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Neutral</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
a	Proper time management in school is valued and carried out					
b	Training students on study skills is valued and carried out					



### **Appendix 3: List of Public Secondary Schools in Kiambaa Division**

1. Gachie Secondary School
2. Kihara Secondary School
3. Gacharage Secondary School
4. Wangunyu Secondary School
5. Muthurwa Secondary School
6. St.Joseph Gathanga Secondary School
7. Karuri Secondary School
8. Senior Chief Koinange Secondary School
9. Muongoiya Secondary School
10. Cianda Secondary School
11. Kanunga Secondary School
12. Loreto Kiambu Secondary School
13. Riara Secondary School
14. Ndumberi Secondary School
15. Kiambu Township Secondary School
16. Kiambu High School
17. Riabai Secondary School
18. St.Annes Lioki Secondary School
19. Tinga'ng'a Secondary School

(Source: Kiambu East District Education Office)