RELATIONSHIP BETWEEN SELECTED DETERMINANTS OF CAREER ASPIRATION AND ACADEMIC PERFORMANCE OF STUDENTS IN PUBLIC SECONDARY SCHOOLS IN NAIROBI COUNTY, KENYA

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DECLARATION AND APPROVAL

I hereby declare that this thesis is my original work and has not been presented for examination for the award of degree or diploma in this or any other university.

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DEDICATION

This thesis is dedicated to my beloved late parents Gabriel and Alice, for instilling in me a sense of discipline and hard work that has reinforced my educational endeavors and my husband Peter and children David, Lucy and Karen for their support, encouragement and patience. I am so thankful to them for being there for me every time I needed them.

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ABSTRACT

Analysis of academic performance reports for Kenya Certificate of Secondary Education (KCSE) in Nairobi County has been slanted towards the poor grades. This poses a threat to the educational sector, which is an imperative pillar in the realization of productive labor force. Determinants of career aspiration are presumed to have influenced students' academic performance. This study investigated the relationship between selected determinants of career aspiration and academic performance of public schools' students in Nairobi County. Specifically, the study investigated the relationship between levels of career aspiration and academic performance, school type and academic performance, academic motivation and academic performance and academic self-efficacy and academic performance. The study adopted a correlation research design. The sample size consisted of 397 respondents drawn from 26477 form four students who were registered candidates for 2017 examination. The research instruments included questionnaire and document analysis. A sample size of 40 students (10% of the actual sample) was used for the pilot study. Purposive sampling was used to select Nairobi County and form four students while proportionate stratified sampling technique was used to select 12 schools from the 84 public secondary schools in Nairobi County. Random sampling technique was employed to select the 397 students from the selected schools. The Self-determination and the Social Cognitive theories formed the theoretical framework in this study. Reliability was tested by computing Cronbach alpha coefficient (α).The Academic Motivation Scale was adapted to measure academic motivation of the students. Academic Self-efficacy Scale was adopted to quantify the students' academic self-efficacy. Student's academic performance was measured by use of the standardized KCSE national examination results of 2017. Collected data was analyzed using both descriptive and inferential statistics in line with the study objectives. The null hypotheses were tested using Chi-Squire *(χ2)* and Pearson Product Moment Correlation Coefficient (r) tests. Statistical Package for Social Sciences (SPSS) aided the data analysis. The findings indicated some evidence of a significant relationship between academic performance and career aspiration, school type, academic motivation and academic self-efficacy. All the tests were carried out at.05 level of significance. On testing the null hypothesis that there was no significant relationship between the students' level of career aspiration and academic performance, Pearson chi-square of 0.019 was attained. Regarding the relationship between school type and academic performance, Pearson chi-square of .000 was achieved. Pearson Product Moment Correlation Coefficient (r) of .000 was acquired in the test of the relationship between academic motivation and academic performance. Additionally, Pearson Product Moment Correlation Coefficient of .002 was also reached in the test of the relationship between academic self-efficacy and academic performance of the students. Since the probability the tests were less than α-value (0.05) all the null hypotheses were rejected at 95% level of confidence denoting that the students' academic performance was influenced by career aspiration, type of school the students attended, academic motivation and academic self-efficacy. The study concluded that career aspiration and its selected determinants influenced students' academic performance in 2017 KCSE exams. A major implication and recommendation of the study was that all stakeholders in education should validate and foster the development of career aspirations, academic motivation and academic self-efficacy among the students. All schools' climates should be made conducive for students' utilization of their full academic potentials. Further research should also consider other determinants of career aspiration such as quality and quantity of career guidance available to students, schools' resources and facilities, parental and teachers' characteristics, teaching pedagogy, students' personality and their relationship with academic performance of the students.

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LIST OF ABBREVIATIONS AND ACRONYMS

AMS	Academic Motivation Scale
ANOVA	Analysis of Variance
ASES	Academic Self-efficacy scale
CDF	Constituency Development Fund
GPA	Grade Point Average
KCSE	Kenya Certificate of Secondary Examination
KNEC	Kenya National Examination Council
KUCCPS	Kenya Universities and Colleges Central Placement Service
NACOSTI	National Commission for Science, Technology, and Innovation
NCES	National Center on Education and the Economy
OECD	Organization for Economic Cooperation and Development
SCT	Social Cognitive Theory
SDT	Self-Determination Theory
SPSS	Statistical Package for Social Sciences
STEM	Science, Technology, Engineering and Mathematics Pathway
UNESCO	United Nation Educational, Scientific and Cultural Organization.
USA	United Nation of America

LIST OF APPENDICES

CHAPTER ONE

INTRODUCTION OF THE STUDY

1.1 Introduction

This chapter presents among other items, the background to the problem investigated, statement of the problem, the purpose, the objectives, and research hypotheses, significance of this study, limitations, delimitation and the assumptions. Lastly, operational definitions of the key terms in the study have been highlighted.

1.2 Background to the Study

Education is a fundamental pillar and component of the economy of any country because of its prospective to inspire the indispensable services, abilities and know-how among the individuals. This makes education vital determinant of integration of youth into labor markets. Formal secondary education prepares the students to exit high school with the required academic requirements and make a smooth transition to the institutions of higher learning (Jibeen & Khan, 2016). Unfortunately, students are faced with lack of career aspiration, academic motivation and academic self-efficacy in their complex educational tasks leading to poor academic performance. It is therefore important to investigate factors associated with career aspirations that precipitate academic performance among the students.

A higher education promises professional careers. By the same token, financial costs of educational failure are also high (Salmi, 2017). Educational qualifications are generally considered a primary source of human capital and a relevant standard in determining labor productivity. They are considered as key benchmarks to judge one's total potentialities and capacities in the world of work. Students' academic performance therefore plays an important role in producing the best quality graduates who are responsible for a country's economic and social development. By knowing the factors responsible for academic success,

nations can benefit in maintaining a competitive knowledge-based economy and ensuring social inclusion. Unfortunately, research is scanty on the factors that are required for thoughtful and thorough career development and academic performance of students.

It has been demonstrated that adolescents who have no career plans may foresee a negative future and may more likely participate in risky behaviors. Those who perceive a greater sense of self-efficacy might feel better armed to make healthier choices and sidestep risky behaviors, even in the face of peer pressure (Aomo, Raburu,Aloka & Agolla, 2018; Bandura, 1977). Contemporary schools' conditions therefore indicate the need for special attention to students' career preparation and aspiration which can motivate individuals to better educational consequences. The current study was thus anchored on the assumption that career aspiration and its determinants influences academic performance of the students.

In the current study, school type, academic motivation and academic self-efficacy (herein referred to as selected determinants of career aspirations) and their relationship with academic performance were studied. Other factors that determine career aspiration like student's personality, parental and teachers' characteristics, school resources and facilities as well as quantity and quality of career guidance availed to the students were not investigated in this study. A review of the literature on the determinants of career aspiration and their relationship with academic performance shows that most of the studies have been done in developed countries (Orvis, Sturges, Tysinger, Riggins & Landge, 2018; Smith, *et al*., 2018; Knapper, 2017; DeCoster, 2017; Nabil, 2015; Ngugen & Blomberg, 2016; Nabil, 2015; DeCoster, 2017) and predominantly with students of institutions of higher learning. The outcome of these studies registered inconsistent findings. Hence, in the present study on determinants of career aspiration in relation to academic achievement was investigated with secondary schools students in a developing country with an aim of extending, comparing and clarifying the previous findings.

In this study, poor academic performance is any KCSE performance that falls below a desired or set standard which determines whether students will proceed to the institutions of higher learning and finally professional career paths. Hence failure in national examinations is disastrous to students, parents and the society which expects to enhance manpower in all spheres of economy. It then becomes imperative that a society takes seriously the development of its human resources by means of improving academic performance. Poor academic performances have been associated with lack of career aspirations (Feliciano, Oliveira & Taveira, 2014; Nyugen & Blomberg, 2014), school type (Dustmann *et al.,* 2017; Osenweugwor, 2018), lack of motivation (Vosh & Schauble, 2014) and lack of self-efficacy (Badura, 1986).

The National Center for Education Statistics (NCES, 2015) which is one of the principal federal statistical agencies mandated with collecting and analyzing data related to education in the United States and other nations reported that at least 20% of children in a classroom get poor marks while `60% of students who participate in one exam or the other get poor outcomes even after they have time to sufficiently prepare for the examination. The OECD (2017) through its assessment program reported poor mathematics and science performance in USA despite its huge resources that can enhance the same. According to this report, about 12% or half a million students fell below proficiency levels. This was in comparison with nations like Hong Kong, South Korea, and Vietnam, where only 5% of the students achieved below proficiency levels in the same subjects.

A study probing signs of school demotivation among students aged 12-16 in China established that 2,854 students (19.6%) were identified as having multiple symptoms of demotivation (Frank, Huazhen & Yossi, 2012). In Botswana academic performance has been deteriorating at an alarming rate where C grade dropped from 75.4% to 41% between 2010

and 2012 hence raising apprehension of all the education stakeholders (Kgosikebatho, 2013). Additionally the results of national form four secondary examinations in Tanzania indicated that about 12.2%, 50.7% and 49.9% students scored zero division in the year 2009, 2010 and 2011 respectively (URT, 2013).

Academic performance in this study is a pointer of the extent to which secondary schools' students achieve specific goals that were the focus of activities in instructional surroundings schools. Kenya statistics reveals poor performance in KCSE in the last four years with an approximately 43% of candidates countrywide obtaining grade D+ and below (KNEC, 2018). In 2016 the worst performance was registered whereby out of 574,125 students who sat for KCSE examinations, only 88,929 (15.41 %) of the candidates attained grade C+ and above which is the minimum entry qualifications to university against a capacity of about 96,000. In this, only 141 students scored grade A plain (about 0.025%). This is compared to 123,365 and 169,492 students who scored grade A in 2014 and 2015 respectively (Aduda, 2016).

In 2017, a total of 615,773 students sat for KCSE examination and an increase of a single student with a grade A was recorded while the number getting A minuses dropped dramatically from 4,645 to 2,714. Only 70,073 (11.38%) candidates scored grade C^{+} and above. In 2018, more than half the candidates (343,897) out of a total of 660204 scored grade D and below which may bar them from pursuing professional courses. Only 90,377 (13.77%) scored C^{+} and above which is the minimum university entry grade. This is despite the fact that education in Kenya has the highest (73%) proportion of national budget compared to other sectors and 40% of the national recurrent expenditure (KNEC, 2017). It is clear that the expenditures of academic underachievement are immense. This situation makes it necessary for more empirical studies to investigate variables that might have influenced poor performance so as to guide policy makers into mitigating them.

Nairobi County has also witnessed a dip in educational standards over the last successive years (See *Appendix D*). In 2009, 2010 and 2011 K.C.S.E statistics indicates that, out of the maximum 12 points, the Nairobi County combined mean score was approximately six which is the equal to a mean grade of C (KNEC, 2017). Accordingly, 2013, 2014, 2015, 2016 and 2017 statistics shows that out of the maximum 12 points, the Nairobi County combined mean score declined to 5 which is the equivalent to a mean grade of D^+ (KNEC, 2017). In 2016 and 2017, the mean grade fell further to 3.98 (D- grade) and 3.65(D-grade) respectively. In 2016 only 5,145 (20.4%) scored C+ grade out of 25258 candidates and 4,263 (16%) in 2017 out of 26477 candidates (KNEC, 2018). It is clear that millions of young students therefore face the prospect of lost career opportunity and lower wages in later life because their secondary schools are failing to educate them to succeed in life (World Bank, 2017) hence the need to investigate factors determining academic performance in order to arrest this academic failure

Nairobi schools are well equipped with adequate educational infrastructure, human resources and technological services (elimuonline.com, 2014) which not only motivates them academically but also enhance their career aspirations and self-efficacy hence placing them for good performance. Nairobi being a capital city and a business hub offer students with opportunities to interact with personnel who are likely to inspire their career ambitions and motivate them academically. Thus, a study that investigates the factors associated with academic performance is crucial at this point in time.

According to Kisilu, Kimani and Kombo (2012), career aspiration are the desires, dreams, career thoughts by young individuals that inspire what they anticipate to study and engage in the world of work. If better career aspirations are shaped at school level, the better the performance and likelihood of achieving the same **(**Nabil, 2015). According to McDaniel (2016) secondary schools students are in adolescence stage which is critical time in the life

path when individuals develop career expectations which influence later educational and occupational accomplishment in adulthood. A focus on career aspiration in schools may help to design palliative interventions.

Despite all schools having the same syllabus, disparities in performance have been noted every year in the Kenya Certificate of Secondary Education examination with weak academic performance registered in mixed schools which have the bulk of the secondary school students in Kenya and Nairobi County in particular . In 2016, the best performing schools and students came from single-sex schools (Kigen, 2016) and this might as well affect the levels of career aspiration. There is much explanation on the educational result related to the type school students' access. Research in Kenya on the question of whether school type benefit students' academic performance has been scanty and yet there has been a resurgence of public single-sex schools in Nairobi County. A case in point is where all the existing girls' day secondary schools in Nairobi County have been converted into boarding schools (Nairobi County Education Office, 2018). It was therefore deemed appropriate to investigate if school type enhances academic performance. Research indicate that schools' type experiences form students' belief about their capabilities which in return define both career aspiration and academic performance of the students (Tamara, Alexander, Daniel & Debbi, 2016; DeCoster, 2017).

In the United States and Britain, there has been an increasing promotion of single-sex school. In the United States mixed schools have been unpopular except in private or parochial schools but of late they are on the rise again in public schools as educators seek ways to improve academic performance. This is contrast with Australia where more than 80% of schools are still mixed (OECD, 2017). In West African countries mixed-sex schools have become the standard due to religious influence (Ajayi, Lawani & Salomi, 2012) where

students are taught to embrace brotherhood. In Kenya some studies have suggested the progressive conversion of all the existing mixed schools into single sex schools to enhance educational performance (Achoka & Barasa, 2013; Kipkoch, 2018). However, skeptics of single-sex schooling have indicated that such schooling may upsurge institutional gender salience (awareness of gender in categorizations), reduce chances for mixed-gender interactions, and increase mixed-gender anxiety (Wang,Sylvia, Zhansheng, 2018). This phenomenon has set off educational dispute over whether type of schools improves educational accomplishment making it subject of debate.

Academic motivation is a hypothetical construct that emanated from Self-Determination Theory (SDT) which is an important theory of motivation that addresses issues of extrinsic and intrinsic motivation (Deci &Ryan, 2000). Academic motivation is the drive that initiates maintain and conclude a behavior that is aimed at achieving academic goals (Vosh & Schauble, 2014). Motivation is therefore the reasons underlying behavior including choice of a career. Motivational beliefs of the students are key determinants of academic performance for it regulate the degree to which a student will consider, value, put effort and display interest in academic tasks (Litalien, Guay, & Morin, 2015; Dogan, 2015). Undeniably, the importance of motivation in academic performance have been revealed in studies among students of different cultural background and at various stages of their academic development (Kumari & Chamunde, 2015; Chelliah & Arulmoly, 2017; Gupta & Rashmi, 2017) but inadequate studies have focused on form four candidates in a developing country. This is despite Ramsdal, Gioerum and Wynn (2013) demonstration that lack of academic motivation and career aspiration are prominent problem for many high school students.

Recent inquiries showed that, individuals who are motivated set high career goals, achieve higher grades, cheat and procrastinate less, and show lower academic burnout (Bong, Hwang,

Noh, & Kim, 2014; Harvey, Milyavskaya, Hope, Powers, 2015). However, some selected studies found no solid evidence that raising aspirations and motivation can lead to higher school accomplishment since some students tend to hold high aspirations even beyond what the labor market can support (St Clair, Kintrea & Houston, 2013). Furthermore, having high career aspirations and motivation without the ability to accomplish them would adversely affect students by causing disappointment, frustration and a social withdrawal, or at least would result in a 'lost talent' (St Rose & Baird, 2013).

Consistent findings in research on academic motivation demonstrate a declining pattern in students' academic motivation after the transition from primary to secondary education. This is despite being a critical time for developing the skills and career identity necessary to prosper in the adult world of work (Ajayi, Lawani & Salomi, 2012; Wijsman, Warren, Saab, Jan, Van & Michiel, 2016). This transition and increased academic expectation may be devastating and stressful experience for young adolescents (15-22 years) who are evolving physically, cognitively, psychologically, and socially hence their interest and attention is divided. Koseoglu (2015) research found that one of the most prominent academic problems plaguing today's youth is lack of motivation towards academic activities. Koseoglu also found a statistically significant difference between male and female students in academic motivation in favor of females who were found to be more intrinsically and extrinsically motivated than the males overall. Future studies should address gender difference in academic motivation for better understanding of the best motivational factors for each gender.

Another important determinant of career aspiration considered in this study is academic Self-efficacy which is a psychological construct developed by Albert Bandura in 1977 as part of his social-cognitive theory of human behavior. Within the framework of Social Cognitive Theory by Bandura (1997), academic self-efficacy denotes to students' confidence and beliefs in their ability to carry out academic responsibilities. According to Bandura (1993,

1995, 1997) efficacy beliefs effect whether people think erratically or strategically, optimistically or pessimistically. It determines how they feel, motivate themselves and behave the quality of their emotional life and how much stress and depression they experience in coping with demanding academic environmental, choices they make and the academic achievement.

Previous studies have reported a causal link between career aspiration and self-efficacy such that the students who lacked a career aspiration reported more hopelessness and less self-efficacy (Bandura, 1995; Bandura, 1977; Pajares, 2006; Stajkovic, *et al., 2018.* Reddan (2014) in his study upholds the role of self-efficacy in making positive career decisions including choosing a career and working hard to accomplish high academic performance. Academic self-efficacy therefore plays a chief role in predicting career aspirations and academic achievement (Bandura, 1995; Pajares, 2000; Stajkovic, Bandura, Locke & Sergent*, 2018*). Students with a high degree of self-efficacy therefore are more involved in the activity, work harder, and sustain high levels of effort even when difficulties are encountered hence improving performance for students who have less natural aptitude for academics.

Bandura's (1994) theoretical four sources of self-efficacy includes past experience, vicarious leaning, social persuasion and physiological/ affective influence influences academic performance. Bryant (2017) revealed that students' academic self-efficacy relate to all the four sources of self-efficacy (Bandura, 1994). Extensive body of work shows that mastery experiences are the strongest predictors of students' self-efficacy through domains and age groups (Banbura, 1997; Usher & Pajares, 2008; Usher & Weidner, 2018) and therefore should be fortified among the students. It is essential for future study to investigate the sources of self-efficacy in order to establish the strongest predictor of academic performance with Kenyan students.

Self-efficacy is under explored outside of the developed world and yet potentially useful concept in school learning. Forewarning educators to the merits of enhancing self-efficacy beliefs and providing them with the intellectual tools, knowledge and strategies would be of significant value in a variety of pursuits throughout the students' lifetime particularly given the strong correlation between academic attainment and self-efficacy (Bandura, 1997). Relationship between the above determinants could be among the factors influence the levels of academic performance in Nairobi County.

The literature reviewed above outlined a relationship between determinants of career aspiration and academic performance though the findings lack consensus and consistency. Thus, it was important for this study to investigate the relationship between career aspiration, type of school, academic motivation, academic self-efficacy and performance of students in Nairobi County. There was limited literature on these variables locally hence the need to study them in order to add more research literature on the hypothesis relating to the widely publicized influence of career aspiration on academic performance of students.

1.3 Statement of the Problem

Academic performance for students is one of the key goals of schools system for it strongly link students to positive outcomes in fulfilling a productive future life. But from the literature discussed above, it is clear that the problem of low academic performance which might have resulted from school type a student attend, lack of career aspiration, low academic motivation and inadequate academic self-efficacy are some of the of the biggest challenges facing the modern educational institutions.

Declined performance trend has been registered in Kenya Certificate of Secondary Examinations (KCSE) examinations in 2016 and 2017, where only 88,929 (15.41 %) and

70,073 (11.6%) of the candidates attained C^+ and above respectively. This is compared with 2013, 2014 and 2015 where the students who attained grade C+ and above which is the minimum qualification to university were 123,365; 169492; 149,717 respectively (Aduda,2016). This may have far reaching implications for the student in terms of missing more rewarding career opportunities embedded in further education, inadequate manpower to the country as well social-economic wastage which is of great concern to all stakeholders in education. Thus, there is need to study the factors that are associated with either high or low academic performance in Kenya.

The performance of students in national examinations in Nairobi County has also being comparatively low and consistently declining over the years (Nairobi County Education Office, 2018; KNEC, 2018). This is irrespective of the high levels of schools' infrastructure, manpower resources, exposure to technological advancement, and reasonable socioeconomic background of the students. For example for the years 2014, 2015, 2016 and 2017 students who attained university entry grade (C+ and above) were 6975 (31%), 7511(32%), 5125(20%) 4263 (16%) respectively as indicated (*See Appendix D*). In 2016 and 2017 the candidates registered the lowest mean grade from the earlier 5.1 (grade C) to 3.978 and 3.65 (Grade D) respectively in the history of this County. The present study aimed at gaining more insight into the relationship between career aspiration, school type, academic motivation, academic self-efficacy and academic performance among form four students in public secondary schools in Nairobi County.

1.4 Purpose of the Study

The purpose of this study was to investigate the relationship between selected determinants of career aspiration and academic performance of secondary schools' students in Nairobi County.

1.5 Objectives of the study

Specifically, the study was guided by the following objectives:

i. Explore the relationship between the levels of career aspiration and academic performance of public secondary schools' students in Nairobi County.

ii. Find out the relationship between schools type and academic performance of public secondary schools' students in Nairobi County.

iii. Investigate the relationship between academic motivation and academic performance of public secondary schools' students in Nairobi County.

iv. Examine the relationship between academic self-efficacy and academic performance of public secondary schools' students in Nairobi County.

1.6 Research Hypotheses

The following null hypotheses were tested in order to realize the above objectives:

H_{01} : There is no statistically significant relationship between the levels of career aspiration and academic performance of public secondary schools' students in Nairobi County.

H_{02}: There is no statistically significant relationship between school type and academic performance of public secondary schools' students in Nairobi County.

H_{03}: There is no statistically significant relationship between academic motivation and academic performance of public secondary schools' students in Nairobi County

$H_{04:}$ There is no statistically significant relationship between academic self-efficacy and academic performance of public secondary schools' students in Nairobi County.

1.7 Assumptions of the Study.

In this study, the following assumptions are made:

i. Students have different levels of career aspiration, academic motivation and academic self-efficacy which points to different levels of academic performance.

ii. The researcher gained access to the respondents who responded to the questionnaires despite their busy schedules preparing to sit for KCSE

iii. The students provided honest responses to the items in the questionnaire

iv. The scales used for data collection yielded valid and reliable information for testing of the hypotheses under the study.

1.8 Limitations of the Study

The study was limited to Nairobi County which is highly urbanized with advanced technological and social facilities which are likely to influence students' career aspiration, academic performance, academic self-efficacy, and academic performance hence generalization of the findings from this study can only be done to the extent that students in other institutions and regions are similar in characteristics and conditions in relation to those of Nairobi County. Conversely, simple random sampling was used to ascertain generalization of the study. Moreover, no control group was utilized and all the items in the instruments were based on self-report which is not independently verifiable hence a degree of subjectivity may be unavoidable. Nonetheless, the research questionnaires were subjected to face validity and pilot study to ensure their clarity and better comprehension by the respondents. Students were also assured of anonymity and confidentiality to secure an honest response. The researcher also supervised the data collection exercise to ensure that the students responded to all the questionnaire items. The Academic Self-efficacy scale used in this study presented a wide range of scores (high level ranged from 33-36 while low level ranged from 8-32). However, reliability of the scale was ascertained using Cronbach's alpha (α).

1.9 Scope of the Study

The research only focused on form four students in 12 public secondary schools who had registered for the 2017 Kenya Certificate of Secondary Examinations (KCSE) in Nairobi County. These national examinations are standardized, hence they were likely to have yielded the most valid and reliable data for the analysis of hypotheses in the study. Students in lower forms, in private and upper educational levels of learning were not studied. The study employed correlation research design hence it is not possible to infer causality of the relationship between the variables under study. The study focused on the selected determinants of career aspiration and their relationship with academic performance while breadth of educational facilities and resources was not studied. Also, students, teachers and familial characteristics as were teaching styles and subjects offered in schools were not studied and which may contribute to students' career aspiration and academic performance. Questionnaires were used as the main data collection instrument because it's qualitative and qualitative nature in data collection.

1.10 Significance of the study

The findings of this study may have significant implications to policy makers, teacher trainers, teachers, parents, students, and other stakeholders in the education sector in Kenya. All stakeholders may appreciate career aspiration and its determinants as real predictors of academic performance hence design strategic programs in enhancing them. The policy makers may also enforce that the determinants of career aspirations are taken into account in formulation of policies as a way of improving educational outcomes of all the students. In a special way more career information may be embedded and emphasized within the curriculum. It is envisaged that teacher trainers may also realize the importance of equipping

teacher trainees with the necessary training and professional development needed to enhance students' career aspiration, academic motivation and self-efficacy.

Teachers may work collaboratively with parents and other diverse groups in the community to enhance academic motivation and academic self-efficacy. Students may overcome their academic inadequacies by cultivation intrinsic academic motivation and self-efficacy. The findings of this study may also contribute to research literature for local, international and cross-cultural comparisons among scholars, researchers and policy makers in Education and other Social Sciences. The study may also stimulate further research work on other determinants of career aspiration and their relationship with academic performance.

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1.11 Operational Definition of Terms

Academic Motivation: This refers to form fours student's desire to learn or liking of learning-related activities

Academic Performance: is the standardized KCSE performance for 2017 form four students in Nairobi County.

Academic Self-efficacy: This refers to the students' beliefs in their competence to succeed academically

Amotivation: Type of motivation where a student feels incompetent, hopeless and helpless in academic activities.

Average Career Aspiration: This is the career aspiration means ranging between 9 and 12 out of the maximum of 15.

Boarding School: This is a residential school where some or all the students study and live during the school year.

Career Aspiration: This refers to the secondary schools students' ambitions in respect to different future career.

Correlation Coefficient: The degree of association between determinants of career aspiration and academic performance of the students

County: Geographical and administrative units envisioned by the 2010 constitution of Kenya as units of the devolved government. There are 47 Counties in Kenya.

Day schools: These are schools in Nairobi County in which students come into the school premises during the day for learning and return to their various homes in the evening.

Determinants: In these study, school type, career aspiration, academic motivation and academic self-efficacy that are presumed to influence career aspiration of the public secondary schools' students in Nairobi County.

Extrinsic Motivation: This is a type of motivation whereby the form four students are encouraged to study by external contingencies. Its orientations include; external regulation, introjected, regulation and identified regulation.

Gender: This refers to socially constructed roles, behaviors, activities, and attributes that the given society considers appropriate for boys and girls in public secondary schools.

High Academic Performance: This refers to grade 'B' and above scores in 2017 KCSE results.

High Academic Self-Efficacy: This is the students' self-efficacy scores ranging 33 to 56 out of the maximum of 56 scores.

High Career Aspiration: This refers to the students' careers aspiration mean score of between 12 and 15 out of the maximum of 15.

Intrinsic Motivation: This denotes a type of academic motivation whereby the perceived locus of causality is internal hence the student engages in academic activities because of interest, enjoyment and inherent satisfaction derived from doing those activities. Its orientations are; to know, to accomplish and to experience stimulation.

Level of Academic Motivation: This is the students' academic motivation score as measured by the Academic Motivation Scale

Level of Academic Self-efficacy: This is the students' academic self-efficacy scores ranging from 8-32 out of the maximum of 56 scores.

Low Academic Performance: This is any academic performance of grade D+ and below in 2017 KCSE results.

Low Career Aspiration: It is the students' calculated mean score of between 5 and 8 out of the maximum score of 15

Mixed Schools: It refers to secondary schools in Nairobi County where both girls and boys learn in the same classroom.

Moderate Academic Performance: This refers to the grades score of between grade C- and B^- in 2017 KCSE results.

School Type: It is the composition of the students in terms of sex in some particular school setting in Nairobi County. These schools are categorized into: boys' boarding, girls' boarding, boys' day, and mixed schools.

Single-sex schools: This are schools in which boys or girls attend school exclusively with members of their own sex.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The chapter is organized and divided into several main components, each of which addresses study hypothesis. Studies on the determinants of career aspirations in regard to academic performance were reviewed. Specifically, career aspiration, the schools types, students' academic motivation and academic self-efficacy and their relationship with academic performance were discussed. Theoretical and conceptual frameworks, as the main guiding principles to the study are also presented. Finally, summary of literature was also highlighted.

2.2 Relationship between Career Aspiration and Academic Performance

The reality of unstable and changing job market of the 21st century is increasingly demanding for a highly educated workforce. Career aspiration therefore needs to be inculcated among the students in preparation for this labor force. Recent research studies in developed countries have proven that career aspirations are mostly inculcated at secondary school level and that they influence academic performance (Nabil, 2015). Career development forms an indispensable part of a learner's overall development, predominantly during adolescence (12-20 years). This is during which significant biological, cognitive, social and emotional changes take place as stated by Robinson and Diale (2017). Accordingly, theories on constructionist, career counseling emphasize early career thoughts which are translated into career aspirations. Thus education policy makers should consider embedding more career information within the curriculum.

A longitudinal study that lasted for 10 years with Australian youths was conducted by Ngugen & Blomberg (2014) to measure students' career aspirations based on the respondents

while they were in school and after school. The results clearly indicated that career aspirations formed at school level provide possibilities of succeeding in academic performance. A student's objective to advance in post-school study is formed and pronounced relatively early in the secondary school years. These career intentions are a strong predictor of subsequent participation in both university and vocational education and training. Hence, educators need to develop or advance a curriculum that can provide students with insights into what goes on in various workplaces in early phases of their schooling Unfortunately in Kenya career information is mainly availed to the form four candidates who are too busy to consume it due to their engagements in preparation for KCSE examinations.

The need for career counseling in educational set up is also supported by Feliciano, Oliveira and Taveira's (2014) research on Portuguese adolescents' students. The findings from this developed country were that students who are more engaged in school activities have higher intentions to continue educationally and were more involved in career exploration. Career exploration therefore was found to be a facilitation condition for better academic performance. In addition, Dudovitz, Chung, Bergen and Wong (2017) study found that career aspirations may reflect an adolescent's sense of identity, hope for the future, and self-efficacy, all of which are linked to academic performance. Supporting students in making well informed choices about subjects can lead them to have a more optimistic outlook on life, sense of purpose and greater level of contribution that they make to their families and society. Career education in this sense need to be and must be made accessible to all. The current study focused on the relationship between career aspiration and academic performance while more study on the relationship between quality and quantity of career guidance available in schools and academic performance may be necessary especially in developing countries.

Another longitudinal study by Nabil (2015) partially supported the previous study outcomes. The study examined how different combinations of aspirations, expectations and school achievement can influence students' future educational. The study confirmations were that students with either high aspirations or high expectations have higher school achievement than those with both low aspirations and low expectations. His findings also designated that having high aspirations without being able to achieve them would negatively influence students by causing disappointment, frustration and arguable social withdrawal, or at least would result in a 'lost talent'. The findings were consistent with Galyon *et al.,* (2012) whose study suggested that investing in raising aspirations of students might only work in some cases and among some students. More studies are needed to shed more light on this double edged conclusion hence the need for this study.

A most research by Karen, Tamara, Frederic, and Phillip (2018) authenticated the previous findings. They investigated the correlation between STEM career knowledge, mathematics self-efficacy, career interests, and career activities on the likelihood of pursuing a STEM career among middle level school students. The study was conducted using a sample of 1448 students in grades 7 and 9 drawn from public schools in Atlantic Canada. Also explored were their mathematics self-efficacy (MSE), their future career interests, and their preferences for particular career activities, and their likelihood to pursue a STEM career. Analysis of this study revealed that students in middle school have a limited STEM career knowledge with respect to subject requirements and with respect to what sort of activities these careers involve. Furthermore, students with low math self-efficacy have a declining interest in STEM careers. This data thus support the need to improve access to career knowledge so as to facilitate students' understanding of STEM careers which increases efforts and career aspiration. This in return reduces STEM anxiety and lead to better performance. The current study focused on the general career aspiration in secondary schools which captures all

students both affiliated to STEM and non-STEM fields. However more study is essential on the career aspiration in relation to various subject domains.

On the other hand, Hafsyan's (2015) study focused on career aspirations and involvement of groups of students of lower division compared to upper division and gender at a single large public university. The study used a sample of 434 honors students and 366 non-honors students. A series of ANOVA and regressions statistical tests were performed to investigate potential differences. Aspirations were bigger for upper division honors students compared to lower division honors students. Additionally, higher academic involvement was related to higher aspirations and may be a mechanism by which the honors program influences aspiration. This is in consistent with Bandura's Social Cognitive Theory (1989) which states that past performance lead to high self-efficacy which is a prerequisite to better summative performance. These findings were based on university students and it was important to design a similar study in Kenya, more specifically among secondary school students in order to compare the results.

Nunez-Pena, Guilera and Suarez-Pellicioni's (2014) study verified that individuals with high levels of math anxiety perform lower than their peers with low levels of anxiety do. Researchers also demonstrated that math anxiety leads to avoidance behaviors and creates psychological obstacles to enrollment in science and mathematics courses. Apart from enjoying studying a subject, students may aspire a career that provide a range of skills that leads to employment and this improves academic performance in that particular subject (Royal Society of Chemistry, 2016). It is evident that to improve career aspiration of the students their self-efficacy must be addressed which is part of concern in this study. Career information is therefore necessary to all students at all levels in order to make a connection

between subjects and future careers and this facilitate students into working hard to attain these academic goals. This leads to improved academic performance.

An earlier study by Cheng (2012) which explored adolescents' educational and career aspirations in Hong Kong high schools and using secondary four students discovered that perceived academic achievement influenced career aspiration. This shows a reciprocal relationship between career aspiration and academic performance which is not tested in the current but can be assumed since the samples used have similar characteristics by virtue of being form four students. However, the current study used actual national examination as a parameter for academic performance making this conclusion more valid.

According to Graduate Prospects Limited (2016), graduates of chemistry may perform better in the subject for they have more job opportunities in fields that are directly and indirectly related to chemistry. Directly related fields include analytical chemistry, chemical engineering, healthcare sciences among others, whereas non-directly related fields includes accounting, patent attorney and many other occupations. In Kenya and Nairobi County in particular, STEM subjects are poorly performed in KCSE and in order to move forward with the national agenda of making the country a middle income economy, it is clear that researchers must examine the underlying factors contributing to this phenomenon. More research should be done on the relationship between various subjects and career aspiration among the students.

More research by Igere (2017) examined career choice and its influence on academic performances of library and information science students in the University of Benin in Nigeria using the entire population as sample. The study revealed that majority of the student's performance was on average because they failed to be admitted to the courses they

had initially chosen and had aspired for indicating a relationship between career aspiration and future academic performance. To improve the students' academic performance, efforts should be made to align students with their areas of interest. Students should be granted autonomy to choose their educational and career paths as indicated in the Self Determination Theory (Deci & Ryan, 1991) in order to satisfy their psychological needs which are a motivating factor into academic success.

In contrast of the above studies, Almon, and Matisidisco (2012) research failed to demonstrate any relationship between career aspiration and academic performance. This study was undertaken to determine factors influencing career aspirations among South African students using a quantitative paradigm. A purposive sample of 133 first and second year university students (77 females, 56 males; age range 15 to 30 years) participated in the study. A relationship between career aspiration and academic performance was not found to be significant. Purposeful sampling of the sample may impede generalization of the results to any other geographical regions unless the population shares common characteristics. The current study used simple random procedure to constitute a sample for the study which captures the characteristics of the entire population. The study took place among university students and the results could have been affected by the different developmental and educational level. The current study took place among secondary schools students who shares demographic characteristics. More future studies should be conducted in Kenyan higher institutions of learning in order to find out whether levels of education affect career aspiration and academic performance in Kenya.

A local study by Mettol and Kisilu (2016) which supported the research findings by Igere (2017) investigated ways in which career preference affects academic performance and graduation of male university students. The unstructured questionnaires were analyzed

thematically and the findings revealed that when parents forced their sons to take courses against their will at the university, they harbored hatred, got demoralized, dissatisfied and frustrated towards the course hence poor performance in the same. The study established that it was easier for the students to excel in something that they had aspired than doing a career for the sake of earning a living. If students are allowed to explore the world of careers and develop their own interests in the same, they are likely to channel all their academic strategies towards the same hence better academic performance is achieved. This idea is consistent with Self-Determination Theory (Deci &Ryan, 1991). The current study took place in secondary schools and among pre-university students in a highly urbanized Nairobi County.

In Kenya, KUCCPS, a body charged with the responsibility of students' placement in both public, private universities as well as tertiary institutions; continue offering double chances for courses revision by students who are have completed form four level of education. This is a clear sign of low career aspiration which requires more empirical research to determine its causes so as to mitigate. A report by Chief Executive Officer of KUCCPS (2017) indicated that more than 25000 students missed their degree of choice in the first revision of university course choices. This report also indicated that only 12,000 students applied to join technical and vocational education and training colleges against a capacity of 51,000 leaving an excess capacity of 38,000 places in 2017. This shows a glaring gap in career sensitization or unrealistic career aspiration despite its importance in academic performance of the students (Ouma, Daily Nation, Jan, 19 2017). According to KUCCUPS estimates majority of these students come from Nairobi County. The main thrust of this study therefore was to determine the relationship between career aspiration and academic performance and significance of this relationship in Kenya where this research is limited.

Gender is one of the most stable features that humans are born with and upon which humans are classified as male and female and prejudiced on the same. Sex-and-gender analysis applies largely to anything with a human endpoint and majorly influence decision-making, communication, stakeholder arrangement and preferences for the approval of interventions and implementation strategies. It is crucial point to consider in policy making especially in determining in labor force.

Despite many changes in policy and legislation, issues of gender equity in the career aspiration and labor market continue to be a major concern of the Kenyan government hence the need for this study. For instance, women remain focused in 'people services' (health-care, retail, education and training, and social services) which invite lower pay rates (Adda, Dustmann & Stevens, 2017).Economically it is desirable to see career aspiration determined on merit, rather than gender. This gender prevalence of different occupational aspirations is linked to the perseverance of stereotypical educational expectations from early in life which needs to be addressed.

Education is involved in the perpetuation of gender inequities and stereotypes by evoking gender markers of objects and activities. This enhances occupational stereotypes which aligned with adult perceptions, even to the extent that children discard those careers seen as belonging to the opposite sex. All the same education can be used as a focus for addressing this social and economic inequity so that students' ambition and potential are not narrowed by gender. Career aspirations are formed at school level and several studies have investigated gender with widely differing conclusions. It is therefore worth discussing gender differences in Kenyan context and makes useful conclusions. Bindu (2016) study explored the level of career aspiration among higher secondary school students in Kerala state, India. A career

aspiration scale constructed was administered to a sample of 250 higher secondary school students. The results suggested that gender influence the level of career aspiration.

Yet another longitudinal study on boys' and girls' career aspirations and interest in technology by Ardies, Maeyer and Gijbels (2015) with first and second grade of the first cycle in general secondary education in the same region of Belgium, also failed to find any significant difference in career aspiration between boys and girls. The findings of these studies contradicted the previous studies and difference could be attributed to contextual factors. A study Wairimu (2012) found insignificant gender influence in career aspiration.. Her study was conducted in Kenya with an aim of finding out which predictor variable(s) had the greatest influence on high school students' career aspirations. *Ex post facto* research design was used with a sample of 240 form two students from 10 public high schools in Nairobi County. A difference in gender in relation to choice of occupations was not significant showing a possibility of socio-cultural influence in career outlook.

In the contemporary world, it is observed that females in high schools are aspiring to pursue STEM related careers which were formally dominated by males while males aspired more for STEM related career. O'Dea, Lagisz, Jennions and Nakagawa found that the ability overlap between girls and boys is much greater in STEM, and smaller in non-STEM subjects, meaning that there are fewer boys competing with girls in non-STEM subjects. Boys should therefore be encouraged to venture into humanity subjects that are traditionally dominated by Girls.

It is clear that majority of studies in the reviewed found a relationship between career aspiration and academic performance. Such are: Igere, 2017; Hafsyan, 2015; Feliciano et al., 2014; Nyugen & Blomberg, 2014; Mettol& Kisilu, 2016**)**. Nabil (2015) partially supported this relationship. Moreover, a study by Cheng (2012) found a reciprocal relationship. Other studies demonstrated a relationship between career aspiration and academic performance in mathematics domain (Karen *et al*., (2018); Nunez-Pena *et al.,* (2014). Yet a study by Almon, and Matisidisco (2012) did not find any significant relationship between career aspiration and academic performance of the students. In terms of gender difference, the outcome of the studies is still indecisive. These research findings which were mainly done in developed countries were inconclusive and inconsistent making the current study necessary in a developing country for purposes of conforming or dis confirming the above literature.

2.3 Relationship between School Type and Academic Performance

In this study the term school type is refer to the composition of school with regard to the gender of students. Thus, schools are categorized as either single-sex or co-educational schools. Single-sex secondary schools may be either for boys (boys' only) or for girls (girl's only). On the other hand, co-educational secondary schools (also known as mixed-sex schools) admit both boys and girls. Previous and voluminous literature indicate that schools' type experiences shape students' belief about their capabilities which in return determine both career aspiration and academic performance of the students (Tamara, Alexander, Daniel & Debbi, 2016; DeCoster, 2017). Single-sex schools are likely to differ from coeducational schools in a number of ways, including competitiveness, academic performance, discipline administration, and levels of motivation. Unfortunately most educational systems emphasizes almost completely on students' academic grades without giving any consideration to the contexts in which these were realized. Research on this remains highly limited despite the

fact that it is critical to the policy makers who determines the school types and, most importantly, to students themselves as their academic performance may impact on their life chances and consequent career opportunities.

Some researchers have determined that the school attended for secondary education had an influence on a female student's future aspirations. Furthermore, Mtemeri (2017) argued that schools influenced students' careers mostly through subjects offered and encouragement that lead students to prefer certain careers over others. In this case girls are inclined towards social sciences which are stereotyped as feminine and boys are more likely to be encouraged to take STEM subjects which are stereo-typically masculine oriented. This trend is likely to cultivate inequality in work place. The best way therefore to achieve academic performance and workplace equality in the future is to enhance, not eliminate, interaction between boys and girls in the classroom

Wang, Sylvia and Zhansheng (2018) study with high school and college students and using a large sample of 2083 (84%) respondents reported that compared to mixed school students, single-sex school students reported higher levels of total mixed-gender anxiety, $p = .001$, $d = .15$ even when students' demographic characteristics were controlled for. Male students indicated more total mixed-gender anxiety, $p = .001$, $d = .15$ than female students. This mixed-gender anxiety may reduce students' motivation in their studies which may lead to poor academic performance. The implication is that female students may avoid traditionally male dominated courses and vice vase. This in turn will lead to one gender being underrepresented in some fields of work. It was also reported that students had higher gender salience in the high school sample, and that single-sex school students had higher mixed-gender anxiety in both high school and college samples. The current study focused on the

relationship between school type and academic performance of the students at secondary school level. More researches need to be done to establish the highest levels of anxiety in other levels of education and various developmental stages which might explain the poor performance in mixed schools in Kenya and Nairobi in particular.

The impact of girls' only classes on mathematical achievement and mixed classes in Switzerland secondary schools were analyzed by Eisenkopf, Hessami, Fischbacher and Ursprung (2012). Single sex classes were found to improve the performance of female students in mathematics. It was also found out that those girls from single-sex physics classes reported a better physics self-concept of ability than girls from mixed classes. These studies that are based on specific subjects' domain makes it clear that single-sex schools broaden students' horizons, allow them to feel free to explore and discover their own strengths and interests, break down gender stereotypes while mixed schools reinforces them, risk reaffirming stereotypes about the interests, abilities or learning styles of both genders. This translates into career stereotypes and under representations of gender in certain field of work. The current study will take place in Nairobi County where majority of the secondary are mixed schools and admit a bulk of students with low academic abilities. It was important to determine the relationship between these schools and academic performance in national examination (KCSE).

Another study by Sampson, Grehan, Leifh, Myers (2015) contested studies which were in favor of single-sex schools through an investigation on the relationship between mixed gender classrooms and science concepts in Texas with eighth grade single-gender science classes at the middle school. Exploratory and quasi-experimental designs were employed and a control group of students in mixed-gender classes was administered to the same scale to

determine what differences, if any, occurred between the three groups. The findings posited that females tended to believe more than males that they were unable to master the subject of science in school.

According to the above study males in the mixed-gender classrooms showed a significant difference in their self-concept in performance in science classrooms. The males had a significant difference at .024 for their response to always doing well in science classes, and .038 for their response to learning things quickly in science. According to this study, whether the females were in the single gender classroom or the mixed-gender classroom, they had significantly lower responses to doing well in science. For this reason single-gender classrooms may not be a successful strategy to increase science self-concept and performance for females as was reported by Eisenkopf*, et al.,* (2012), but may be a strategy to increase higher level discourse for all students. It can be presumed that there are no consistent findings in this regard and that single-sex education is neither advantageous nor disadvantageous. Therefore more empirical findings are required to guide this practice.

Highest quality studies do not support the view that single sex schooling provides benefits compared with mixed schooling. A meta-analysis study conducted by Erin *et al.,* (2014) on the effects of single-sex compared with mixed schooling on students' performance and attitude using 184 studies emphasized the importance of mixed education. Their study consisted of 1.6 million students in Grades K–12 from 21 nations, and tested multiple outcomes (e.g., mathematics performance, mathematics attitudes, science performance, educational aspirations, self-concept, gender stereotyping). Studies were distributed into uncontrolled and controlled.

Uncontrolled studies in the above research showed some modest advantages for single-sex schooling, for both girls and boys for outcomes such as mathematics performance but not for

science performance. Controlled studies, however, showed only trivial differences between students in single sex versus mixed for mathematics performance and science performance and in some cases showed small differences favoring mixed education schooling. The current study will focus on academic performance as the only outcome unlike the above study that focuses on multiple outcomes. Additionally, the current study will not use a control group. This finding is important to policy makers in Kenyan context and in Nairobi County in particular where mixed schools are being converted into single-sex schools at an alarming rate with an aim of improving academic performance.

A further example of this phenomenon was reported in an earlier study by Spielhagen (2011) in which he explored the perspectives of middle school teachers who were hired to teach single-sex classes in Southeastern United States of America. A majority of the teachers felt that their students were more focused and that the single-sex classes would allow them to meet the specific needs of the students. They also felt that they need professional development to enhance their varying teaching styles and knowledgeable administrative support.

Opponents of single-sex instruction believe that accomplishments attained in single-sex environments can be achieved in mixed environments if the proper teaching strategies were in place. Teachers' own experience suggests that working in consonance with gender differences can help to boost achievement for both girls and boys, even in mixed classroom (NASSPE, 2013).Teaching styles therefore may improve the qualifications obtained by the students. Either or both of these arguments could explain why learners from mixed schools in Kenya achieve lower results hence school grades may not reflect true academic potential of the students but school type does. It is presumed that males and females would benefit from individualized instruction based on the differences in their learning styles and cognitive

development due to their biological differences. It is important therefore to have further studies into the influence of the teachers' teaching styles on the academic achievement of students in various schools' set up.

In Kenya teachers are not trained on teaching styles for different genders neither is the gender of the teacher taken into considerations when posting a teacher to a school except for school principles. Studies are necessary to find out whether this teacher factor is the cause of massive failures in KCSE in mixed schools in Nairobi County and possible causes of gender disparity in performance given the fact that boys' schools outperform girls in our public secondary schools and if possible mitigate the poor academic outcomes for girls.

Busari (2016) collected data from the West African School Certificate examination for the selected schools for year 2008 and 2009 on order to compare the performance levels of students of single-sex schools against mixed schools. He observed a significant difference between the academic performances of the students in mixed schools and single sex schools in favor of single-sex secondary schools. Oluwaseun (2016) contested this finding in his study on the effect of school variables on student academic performance in Calabar Municipality Nigeria using a descriptive design. From a total of 44 schools, samples of 200 secondary schools' students were randomly selected. The chi-square (X^2) test analysis was employed to test the hypotheses. The result stated that there is a significant influence of school type on student academic performance with mixed school students performing better than single sex student.

Oluwaseun (2016) study is congruent with an earlier report by the United Nations Educational, Scientific and Cultural Organization (UNESCO, 2018) reported that the girls in a single-sex classroom had the sense of ownership of their class. They find it easier to

contribute to oral discussions and ask questions without being ridiculed hence better performance than in mixed classroom where girls perceived the dominance of boys which affect their self-esteem, self-concept, and confidence in academic learning. A Likelihood of sexual harassment of girls in mixed schools could also affect girls' academic performance.

A recent study conducted by Osenweugwor (2018) on influence of single-sex and mixed schools on the self-efficacy and emotional intelligence of adolescent girls and boys in Nigerian secondary schools was in conformance with the studies that supports single sex schools. The study employed a correlation survey research design and students of the same educational level just like the current study. However, General Self-efficacy Scale by Shwazer & Jerusalem (1995) was used to collect data on self-efficacy unlike the current study where Chemers, Hu and García, (2001) self-efficacy scale was employed. Results of the study revealed that adolescent boys in the single-sex school had significantly higher self-efficacy and emotional intelligence than their counterparts in the mixed schools. A statistically significant difference was found between the self-efficacy of girls in the single-sex school and girls in the mixed school in favor of the single-sex school while there was no significant difference in emotional intelligence. Self-efficacy according to studies constitutes to better academic performance.

Nevertheless, there is a risk that single-sex programs may categorize, either in resource allocation or in the range of educational opportunities offered especially in Kenya where resources are scanty. However other commentators argue that single-sex schools cannot adequately prepare students for the real world of work and that allowing single-sex education would be a legal step backwards by promoting outdated stereotypes (Sampson *et al.,* 2015). Although there is no doubt that some single-sex education programs have enjoyed successful

outcomes, no rigorous studies have linked their successes to the single-sex structure rather than to other factors hence more empirical research is necessary.

A local study by Kachero (2014) in mixed schools and students' academic performance in Kenya concluded that most of the students and teachers prefer single-sex schools to mixed schools because of high level of indiscipline, boys' offensive behavior towards girls, encouragement of boy-girl relationships that interfere with learning, the fear of girls to participate freely within classroom as well as teachers' differential treatment of boys and girls in favor of boys in mixed schools. In Kenya boys outperform girls in science oriented subjects in mixed schools (KNEC, 2016). The present study investigated whether the school type is responsible for the difference in academic performance in KCSE, 2017.

Another local research finding by Achoka, and Barasa, (2013) supported the value of single-sex schools using single girls' schools that were converted from mixed schools in Trans-Nzoia District in Kenya. It is true that single-sex schools may reduce influences of adolescents' culture that tend to distract students' attention from academic learning. Furthermore, Mburu (2014) study pointed out that there is distraction" inherent in mixed gender educational settings for adolescents and reduces chances of academic success.

A study by Dustmann, Ku and Kwak (2017), also suggests that the presence of girls in the same school is likely to distract boys from academic pursuit though girls on the other hand are less prone to such distraction effects unless they are exposed to boys at the classroom level. This study could explain why conversion of mixed schools into single-sex schools has attracted much policy interest as a potential tool for promoting pupils' academic achievements in Kenya from 2016. This was the time public secondary schools were plagued with unrest and indiscipline that led to burning over 100 schools. This idea is reinforced by the latest study by Kipkoch (2018) with secondary schools students in Nakuru, Kenya. He

recommended progressive conversion of all the existing mixed schools into single sex schools to enhance educational aspirations of students. Further to this, Kithela's study (2016) supported this claim. The current study sought to expand this evidence base by examining relationships between a selected correlates of career aspiration as predictors of academic performance in Nairobi County

Mwangi (2018) carried out a study to investigate the relationship among type of school, academic resilience and academic achievement among secondary school students in Kiambu County in Kenya using a descriptive correlation design. A sample of 390 students was randomly selected from the third year of secondary education that was drawn from four types of secondary schools. From this study, learners from boys boarding were found to have the least mean academic resilience scores. According to Mwangi (2018) academic resilience is significantly related to academic performance. This is in agreement with earlier research (Voyer & Voyer, 2014, Tamara *et al.,* 2016). However the findings also contradicted previous research that girls' response to science subjects is always lower than that of boys irrespective of school type they attend (Sampson, *et al.,* 2015).

The use of single-gender classrooms and related academic performance therefore continue to be a highly debated topic that requires more empirical evidence. Though some studies conclusion was that single-gender instruction offers some encouraging outcomes (Achoka, and Barasa, 2013); Kachero, 2014); Busari, 2016) the verdict is still out on how it impacts academic performance and career aspiration hence the need for this study**.** Oluwaseun, (2016) felt that inadequate studies have been conducted to make a strong claim that single-sex environments are better than coeducational environments. In this case, education stakeholders making the choice of schools need accurate information about whether single-sex programs yield better outcomes than mixed programs.

In conclusion it is notable that some studies were in favor of single sex education in the enhancement of academic performance (Dustmann *et al.,* 2017; Osenweugwor, 2018; UNESCO, 2018; Busari, 2016; Spielhagen, 2011; Eisenkopf *et al*., 2012; Mtemeri, 2017; Tamara et al., 2016; DeCoster, 2017). Others found trivial or no differences at all (Spielhagen, 2011; Sampson et al., 2015). Available local studies supported single sex education in enhancing academic performance of the students (Mwangi, 2018; Kipkoch, 2018; Kithela, 2016; Achoka, and Barasa, 2013; Kachero, 2014). However none of these studies have been done in Nairobi County with form four students which was the focus of this study.

2.4 The Relationship between Academic Motivation and Academic Performance

Motivation is the drive that moves us to do or not to do something (Vosh & Schauble, 2014) and has been significantly associated with academic performance by numerous studies (Gupta & Rasmi 2017; Smith, *et a*l., 2018; Huseyin, Chelliah, & Arulmoly, 2017). Children are naturally and intrinsically motivated in their own learning and development but this motivation declines drastically at secondary schools level. This could be attributed to developmental, increased contextual and academic changes (Ramsdal *et al.*, 2013). This marks lack of academic motivation as a prominent problem for high school students. As a result there is a global concern in the education sector on how to initiate and maintain academic motivation so that students learn optimally at school, attain realistic career goals and academic excellence in their academic pursuit.

Those students who are motivated in learning are expected to have high career aspiration and perform considerably higher academically (Gupta & Rasmi, 2017). Consequently, motivation is seen as a prerequisite of academic engagement and outcome. A study carried out by Smith *et a*l., (2018) justifies the importance of academic motivation among medical students in Latin America. In their study, 4,290 medical students from 10 countries in Latin America took part and "Attribution Scale of General Achievement Motivation" was used to evaluate

their general performance. The “Medical Motivation Scale” test was used to measure social, altruist, economic, and prestige motivators.

The findings of this study showed a strong association between good grades at school and academic performance. Accordingly, motivation increased according to the year of study and was higher when pressure by the family was applied indicating the importance of external motivation domain in performance. This indicates the role of parents and significant others in enhancing the academic performance of the students. The current study investigated academic performance and academic motivation among secondary schools’ using Academic Motivation Scale (AMS) High School version developed by Vallerand, *et al.,* (1992) to determine the levels of motivation in of both males and females. A similar research is commended with students in different levels of education and courses.

Similarly, another study with Indian medical students by Sonu, Federica, Nonite, Neetu and Dirk (2018) observed that the motivational factors are multifaceted. Students’ academic gain and learning performance is affected by numerous factor including gender, age, teaching style, students school type, parental social economic status, residential area of students, medium of instructions in schools, tuition, study habits and general characteristic of the students . It is important therefore to identify motivational factors among the secondary schools’ students so as to enhance them. The studies indicate the need to study other mediating demographics like familial characteristics and different levels of academic pursuit for better understanding of motivation and performance. The current study took place among secondary schools’ students and offers cues to policy makers and educators to formulate policy that strategies on specific students’ relevant motivation domain.

Another study with university students was done by Huseyin (2017). He explored the role of academic motivation in predicting the academic performance of pre-service English teachers in Hacettepe University, Ankara, Turkey. Participants were 98 university students enrolled in an English teacher education program. Data was gathered using the Academic Motivation Scale and self-reported measure of their cumulative grade point average (GPA). Findings revealed a statistically significant relationship between academic motivation and academic achievement. Intrinsic motivation had more predicative power than extrinsically oriented regulations. Findings underscore the importance of intrinsic and extrinsic dimensions of academic motivation in university students' achievement, supporting the argument that pre-service teachers' behavior can be intrinsically and extrinsically motivated or even demotivated. The current study focused on secondary schools students in a developing country. The present study also found that the extrinsic introjection which is a sub-scale of extrinsic motivation had the most predictive power to academic motivation hence be enhanced among the secondary among the secondary schools students.

A host of authors (Cherif, Movahedzadeh, Adams, & Dunning, 2014) conducted a study requesting 739 students to provide their own viewpoint of why students fail courses and drop out of colleges. In that study, the many reasons students provided for failing courses in colleges were grouped into seven main sets, including motivation (35%), study habits (17%), academic preparedness, (12%), external factors (11%), attitudes (11%), and instruction (10%), and relevancy issues (4%). Motivation and study habits were stated most frequently as the main causes of students' failure at the college level. The current study used academic performance as an outcome of academic motivation.

Another study with college students by Zubair, Khan and Ayub (2019) found that quality of teachers, teaching methodology and content are the most important motivational factors among the students which were not focused in the current study but recommend further research in the same in Nairobi County. Additionally, Sikhwari's (2017) study using a sample of second year students representing four schools at the university in Limpopo, South Africa found that there were significant correlation between self-concept, motivation and academic achievement of students. The study acknowledged the importance of self-concept and motivation to academic achievement. It was also found that female students are significantly more motivated than their male counterparts. The current study focused on secondary schools' students and concurred with the previous study that females are more motivated that males. This indicates the need to help the boy child to get motivated to avoid inequality in both academic performance and workplace.

At secondary school level, Kumari and Chamunde (2015) conducted a study on the relationship between motivation, study habits and academic achievement of student using survey method. A sample of 457 students from the Indian secondary level was used for the study. Achievement Motivation Scale was used to measure students' achievement by motivation. The results of the statistical analyses show a significant correlation between achievement motivation and performance of students. Moreover, a study by Chelliah and Arulmoly (2017) among the junior secondary students in type II School in Paddiruppu Educational zone, Batticaloa district affirmed these findings by justifying the importance of motivational factors in academic performance of students. In the current study, form four secondary school students participated in the research and Academic Motivation Scale (AMS) measured the levels of academic motivation. The studies indicated that motivation goes beyond contextual factors. Nonetheless, more studies are required with primary schools pupils for generalization to be done.

Further to the above studies, Gupta and Rashmi (2017) demonstrated the importance of motivation in academic performance. The study examined the relationship between academic motivation and academic achievement of Class IX students of Assam, India. Academic achievement was measured using the final year examination while the current study used final form four examination results (KCSE). The findings of the study revealed a significant positive relationship between academic motivation and academic achievement. The study observed that there is an increase in lack of motivation among the students towards their academics especially when they reach high school. This was attributed to divided attention among many things like peer group, heterogeneous relations, fashion and incessant entertainment and this hampers their academic performance. Strategies therefore are required to keep the students motivated throughout their secondary school life. This is more so in Nairobi County where distractions inherent in urban regions may affect the students' concentration in school work.

Oraib and Musa (2012) further supported the importance of academic motivation among secondary schools' students in the study on the relationship between academic motivation and academic performance of secondary school students' at Salt city in Jordan. The study sample included 441 students (210 male, 231 females). It was observed that students who passed exams showed higher levels of motivation than those who failed. Students should then be exposed to school programs where they have a possibility of success in order to boost their motivation. In the current study the specific motivational domains were taken into account (extrinsic, intrinsic and amotivation).

In terms of motivation domains, a study was carried out by Gbollie and Keamu (2017) with Liberian junior and senior high school students in connection with motivation and their academic performance. Utilizing a cross-sectional quantitative research design, 323 participants took part in the study from two Counties. Motivated Strategies for Learning

Questionnaire (MSLQ) was adapted and 12 potential learning hindrances were identified and used as instruments. The results showed the motivational belief component of extrinsic goal orientation as the most preferred belief. Liberian quest to acquire education is influenced by external forces like the desires for rewards and fear of penalty by parents and teachers and not based on their inner aspiration.

In support of the above these findings, Knapper (2017) investigated factors that motivate third grade students to perform well academically and to learn how those factors impact student achievement. To do this, the researcher surveyed 37 third grade students, interviewed two third grade teachers, and observed two different third grade teachers. The results of the study indicated that students are more academically motivated by extrinsic rewards. However, both internal and external factors stimulate desire and energy in students to be continually interested and committed to their studies in order to attain a career goal. The current study investigated the relationship between sub-scales of academic motivation and academic performance of the secondary schools' students in an urban set-up.

In contrast, Damianus, Theogenia, Frederi and,Jean (2019) in their study on extrinsic and intrinsic aspirations of students of Divine Word Colleges in Ilocos Region, Philippines and their Academic performance failed to find any significant relationship between extrinsic aspirations and academic performance *(p = -0189)* while the relationship between intrinsic motivation and academic performance was very high (*p = 0. 25024*)* all at *0.05* significance level. Vecchione, Alessandri and Marsicano (2014) argued that the predictive value of intrinsic motivation on academic outcome tended to be stronger for females, whereas the impact of extrinsic motivation was stronger for males. Besides, intrinsic motivation is not caused because it is an innate human propensity, but it is alternatively stifled or encouraged by unfavorable or favorable conditions.

Some studies however focused on specific subject domain in regard to motivation and academic performance. Such a study was conducted by Chelliah and Arulmoly (2017) on the impact of academic motivation on student's academic achievement and learning outcomes in mathematics among secondary school students in Paddiruppu Educational Zone in the Batticaloa District, Sri Lanka. The study was carried out on 300 junior secondary students randomly selected (grade 9 which are transformation group from junior secondary to senior secondary grade10) from 10 semi-urban and rural type 2 schools, and schools were stratified randomly. The age ranged from between 13.5 and 14.5years (who were stayed in grade 9, the year of 2016). The finding shows that motivation has impact on academic achievement of secondary type II school students in mathematics with respect to gender. The current study was subject oriented while focused on overall motivation. The study also took place among secondary schools students who were transiting to post -secondary level of learning and used academic motivation domains to measure the levels of academic motivations. Thus it can be concluded by making insightful suggestions and recommendations to the authorities, policy makers, schools, teachers, in helping students to enhance their motivation to improve their academic performance. More investigations should be conducted on other subjects offered in secondary schools so as to offer more specific assistance to the students in enhancing their motivation.

Consequently, Dawson-Brew and Nyarko-Sampson (2017) study indicated that extrinsic motivation *(r = .078, P = 0.026*) positively correlated with academic performance of learners of the University of Cape Coast Distance Education programs in Ghana. There was no correlation reported between intrinsic motivation and academic performance of students. This is regardless of Orvis, Sturges, Tysinger, Riggins and Landge (2018) study which showed that the best academic outcomes are associated with intrinsic motivation though their study

indicated that the types of extrinsic motivation identified by students were the least autonomous ones, such as external and introjected regulation.

Yet another study was carried by Nadia (2018) using a sample of 200 students (100 males and 100 females) from different colleges of Karachi and aged between18-21. She investigated the relationship between intrinsic and extrinsic motivation on academic performance. The Academic Motivation Scale (Vallerand *et al.,* 1992) which was also used in the current study was administered to judge academic intrinsic and extrinsic motivation while academic performance was measured using last GPA. The relationship between academic motivations was tested by use of Pearson Product Moment Correlation Coefficients just as in the current study. Results proved that that intrinsic and extrinsic motivation and academic performance were positively correlated *(r =.563; n=200; sig=.000)* and that both motivations improves academic performance of the students. Since both types of motivation improved the student academic performance, it is important to adopt strategies that motivate students both extrinsically and intrinsically.

A study by Onyekwere, Okoro and Eugene (2018) in Nigeria investigated the influence of extrinsic and intrinsic motivation on pupils' academic performance in mathematics. Descriptive research design was adopted for this study with sample size of 200 primary six pupils. The study concludes that motivation improves academic performance of the pupils and there is also gender difference in motivation type and academic performance. According to these studies gender is an important factor in all academic levels and developmental stages.

A most recent study by Sharma and Sharma (2018) among of late childhood school students found that female students are significantly more motivated than their male counterparts. Bear *et al*. (2017) emphasized that intrinsic and extrinsic motivation affects the performances

of all the students irrespective of their gender. Hakan and Kiliner (2017) study with college did not find any gender difference in academic motivation, Sikhwari's (2017) study consisting of second year students representing four schools at the university in Limpopo, South Africa reported that female students are significantly more motivated than their male counterparts. It is therefore recommended that education stakeholders develop strategies on how to facilitate both extrinsic and intrinsic motivations of the students and strike a reasonable balance. Also students cannot be interested in a task if they are not aware of the purpose it serves in learning. More investigation is necessary in order to establish most predictive type and domain of motivation especially in respect with students in Nairobi County.

However, this argument in support of the relationship between academic motivation and academic performance is incompatible with the study by Atieh, Hassan, Fezzaeh, Mohammad, Hoda (2016). The findings of their study showed insignificant relationship between the academic motivation and academic performance. These findings are in agreement with an earlier study by Moyosola, Gbemisola and Fasooto (2013). This study observed that academic self-efficacy, academic motivation and academic self-concept significantly predicted students' academic performance. However, terms of the magnitude of contribution, academic self-efficacy made the most significant contribution to academic performance and academic motivation made the least contribution to academic performance. Additional studies to understand more completely the key tenets of academic motivation and in comparison with other factors of academic performance are therefore required hence the need for this study.

A local study by Mugo & Kibera (2014) studied factors affecting motivation and academic expectations, aspirations of students in secondary schools in Laikipia county of Kenya. The population included 5206 students in the 18 public secondary schools. A random sample of

349 students (including 194 boys and 155 girls) and 18 school principals was drawn from 18 schools. Learner characteristics were influential in determining students' level of motivation which consequently influences academic performance and career aspiration. The study was based on a sample drawn from a rural setting. The current study is relevant in an urban setting in order to report on the cross-geographical differences and similarities if any.

Another local study by Kariuki, and Mbugua, (2018) on the influence of students by teachers on academic performance in Nyeri and Kirinyaga Counties in Kenya, found that rewards played a significant role in improving the students' academic performance hence they should be emphasized by all teachers. Rewards in this case involve recognition and special privileges in class. The study therefore recommended that since most of the learning occurred inside the classroom and that teachers played a key function in motivating students, positive teacher-student relationship should be improved to enable all students to acquire high levels of motivation.

Since motivation influences what, how, and when students learn, it is important to find out how gender is related to differences found in motivational functioning in order to work with students' motivational systems than impose motivation. However, research on sex differences in academic motivation has yielded mixed findings. Some studies have reported that females show significantly higher levels academic motivation than males. Past research has also indicated that males and females are likely to score differently on those various aspects of academic motivation. These gender differences are apparent within intrinsic attribute.

Past research has shown us that males have higher motivation in the subjects of STEM and females have higher self-efficacy and motivation in the language subjects. Khemka (2014) wrote a paper to explore the constructs of self-efficacy, domain-specific self-efficacy and

differences in gender related to academic self-efficacy. The aim of the paper was to develop intervention designs that help improve academic self-efficacy and motivation for females in the field of STEM and males in the field of English (reading/writing). Results showed there were no significant differences in students' achievement motivation due to sex. These findings are incompatible with Myfanwy, Sarah, McGeown & Clair, (2015) who investigated gender differences in adolescents' academic motivation and classroom behavior using 384 boys and 366 girls aged 11–16 (*M* age = 14.0, 1.59 SD). The findings showed gender differences in academic motivation in favor of girls. A most recent study by Sharma and Sharma (2018) among of late childhood school students found that female students are significantly more motivated than their male counterparts.

Karatas and Erden (2014) studied undergraduates' academic motivation in Turkey with 75 subjects from different departments. Data were collected using "Academic Motivation Scale", originally developed by Vallerand et al. (1992) which was also used in the current study. Analyses of t-test were conducted to determine academic motivation in terms of their gender and grades. The results indicated that Amotivation level of male was higher than female students. Besides, extrinsic motivation level of male was higher than that of female students. Koseoglu (2013) disagreed with these findings after finding out that female students are more intrinsically and extrinsically motivated than the males overall. Furthermore, a study by Ayub (2018) with 200 college students in Karachi found gender difference *(t=4.324, p <.05)* on motivation and academic performance of the students. Bear et al. (2017) emphasized that intrinsic and extrinsic motivation affects the performances of all the students irrespective of their gender. The current study sought to find out the levels of academic motivation according to Vallerand et al. (1992) in respect to gender but using a bigger sample of 397 secondary schools' participants.

Hakan and Kiliner (2017) study with college students aimed at determining the level of intrinsic motivation of open and distance education students. Thus, data were collected from 1,639 distance education students in 22 programs using Intrinsic Motivation in e-Learning Questionnaire developed and validated to that end. Analyses carried out indicated that the level of intrinsic motivation of open and distance education students was high in e-learning environments, but there is not a statistically significant difference by gender. Sikhwari's (2017) study consisting of second year students representing four schools at the university in Limpopo, South Africa reported that female students are significantly more motivated than their male counterparts. The current study took place in secondary schools in a developing country.

A recent study by Onyekwere, Okoro and Eugene (2018) in Nigeria investigated the influence of extrinsic and intrinsic motivation on pupils' academic performance in mathematics. Descriptive research design was adopted for this study with sample size of 200 primary six pupils. The study concludes that motivation improves academic performance of the pupils and there is also gender difference in motivation type and academic performance. According to these studies gender is an important factor in all academic levels and developmental stages. The current study adopted correlational design and general academic motivation with secondary schools' students in Nairobi County.

Since both intrinsic and extrinsic motivations are associated with academic performance according to previous studies, a balance between these two types of motivations is recommended by Tarvan (2019). This researcher outlined that too much of one or the other might be ineffective. For example, if students are motivated extrinsically for something in which they already have intrinsic motivation, they might decrease the overall self-motivation. This is called this "over justification". However, intrinsic and extrinsic motivation can be

used collectively in order to achieve an optimal balance of motivating factors. Overall, a combination of both internal and external motivation is the best way to motivate students.

According to the above literature, some authors found a significant relationship between academic motivation and academic performance (Gupta & Rasmi 2017; Huseyin, Chelliah, & Arulmoly, 2017; Oraib and Musa, 2012; Smith *et a*l., 2018) while other researchers (Atieh, Hassan, Fezzaeh, Mohammad, & Hoda, 2016); Moyosola, Gbemisola, & Fasooto, 2013) failed to find a significant relationship on the same. In relation to motivation domains some researchers found that intrinsic motivation as the most predictive of academic performance (Orvis, Sturges, Tysinger, Riggins and Landge, 2018; Vecchione, Alessandri and Marsicano, 2014) while others were in favor of extrinsic domain (Dawson-Brew, & Nyarko-Sampson, 2017; Gbollie and Keamu, 2017; Knapper, 2017). Chelliah and Arulmoly (2017) found impact of academic motivation on student's academic achievement and learning outcomes in mathematics and Laur (2017) in biology.

Motivation is therefore a fundamental recipe for academic success. It involves internal and external factors that stimulate desire and energy in learning. The kind of motivation that influences the students' academic motivation is contentious according to the above studies yet motivation help the students to determine the extent to which they consider, value, put in effort, and show interest in the task hence related to self-efficacy. It is also imperative to note that much of the previous researches have been conducted among students residing in post-secondary educational contexts making the current study on secondary schools' students a necessity.

2.5 Relationship between Self-efficacy and Academic Performance

The students' performance plays an important role in producing the best quality graduates who will become great leader and manpower for the country as well as for the country's

economic and social development. Some psychological factors play an important and significant role in enhancing or declining academic attainment such as academic self-efficacy which is worth investigating and use it to improve the academic performance of students in the different areas of education.

Academic self-efficacy refers to students' confidence in their ability to carry out such academic tasks, as preparing for exams and writing term exams (Bandura, 1997). Bandura's (1986) fundamental arguments as regards the role of self-efficacy beliefs in human functioning is that students' level of motivation, affective states, and actions are grounded more on what they believe than on what is objectively true. For that reason, if a person's perceived self-efficacy is high, he put efforts into a task and his performance actually reaches higher levels. Conversely, if his self-efficacy is low, he performs under his level of capacity (Gun & Yildiz, 2014). As a result, people's accomplishments are generally better predicted by their self-efficacy beliefs. Nevertheless, no amount of confidence can produce success when requisite skills and knowledge are absent.

According to Zimmerman (2000) efficacious students are more motivated than their less efficacious counterparts hence they perform better academically. A great number of studies support this idea yet students remain unexposed to sources of self-efficacy. There is a wealth of empirical evidence that connects self-efficacy with academic performance (Bandura, 1989; Ibrahim& Ibrahim, 2017; Koloa, Munira, Wan & Nobaya (2017). However, the validity of this relationship has not yet been rigorously tested (Hoigaard, Kovac, Overby, & Haugen, 2015) and more so in the developing countries hence the need for the current study.

A study by Moyosola *et al.,* (2013) investigated the role of academic self-efficacy, academic motivation and academic self-concept in predicting secondary school students' academic

performance. Using 398 respondents and employing multiple regression analysis to analyze the data observed that academic self-efficacy, academic motivation and academic self-concept significantly predicted students' academic performance. In terms of the enormousness of contribution, academic self-efficacy made the most significant contribution to academic performance and academic motivation made the least contribution to academic performance. It is then clear that the higher the level of personal academic efficacy expectations, the greater the efforts made to achieve learning goals. Admittedly, people with higher self-efficacy and motivation do not easily give up when confronted with learning difficulties (Ersanla, 2015).

On the basis of the findings, it is recommended that academic self-efficacy, academic motivation and academic self-concept should be enhanced among secondary schools students using appropriate counseling strategies. These findings were validated further by a study by Karen, Camelo, Sanchez, and Pinto (2017) who explored the differences in the academic self-efficacy of Mexican high school students. A gird questionnaire was administered to 1,460 students from private and public schools. The outcome of the study showed that achieving students showed significantly higher academic self-efficacy than their peers. This study supplements the current study that took place in public secondary schools only. It mean that self-efficacy predict academic performance of students irrespective of their educational settings hence the need to augment it at all cost.

Furthermore a most recent study by Tiyuri, Saberi, Miri, Shahrestanaki, Bayat and Salehiniya (2018) with postgraduate students of Tehran University of Medical Sciences (TUMS) verified the importance of self-efficacy in academic performance. The data were gathered with Phillips and Russell's research self-efficacy questionnaire. The current study used Chemers, Hu and Garcia (2001) scale. Grade point average (GPA) used to measure academic performance is equivalent to KCSE used in the current study. The study showed a significant

direct relationship between students' GPA and research self-efficacy score (r = 0.393, P = 0.0001).The conclusion was that there exist a direct and significant relationship between research self-efficacy score and student's academic performance, improving the research self-efficacy will also increase students' academic performance. The current study focused on students in secondary schools hence offering valuable comparison.

Another study with post- secondary school students was done by Koloa, *et al.,* (2017) who investigate the levels of students' academic self-efficacy and academic performance among final year students' in one of Nigerian Colleges of education. A total sample of 339 respondents who were stratified and randomly selected from five faculties of the College participated in the research. The respondents were between the age of 19 to 34 years old with mean age equals 23.19 *(SD= 2.64)* while the current study comprised of form four students aged between 17- 20 years. The findings revealed that, 80.82% of the respondents have higher levels of academic self-efficacy in the College. Also positive and significant relationship between academic self-efficacy beliefs with students' academic performance *(r = 0.342, $p < 0.01$)* were recorded indicating than academic self-efficacy is crucial irrespective of age, developmental stage and educational level. Therefore, it is suggested that students' should be exposed to self-efficacy intervention program in order to enhance confidence to perform well and deal with all academic related tasks positively. The current study concentrated on secondary schools' students in a developing country and further sought to establish gender differences in academic self-efficacy.

Besides, a longitudinal study by Hwang, Choi, Lee, Culver, and Hutchison (2016) which tracked students in Korea from Grade 8 to Grade 12 investigating their academic self-efficacy and achievement with 1-year intervals revealed consistent reciprocal effects between

achievement and later academic self-efficacy *(β = .36 - .44)* and between academic self-efficacy and later achievement *(βs = .13 - .14).* Moreover, Williams and Williams (2010) tested the reciprocal relationship between mathematics self-efficacy and mathematics achievement in 33 countries and found supporting evidence in 24 of those countries.

Still another research study with university students was executed by Alegre (2014) to determine the relationship between academic self-efficacy, self-regulated learning and academic performance of first-year university students in the Metropolitan Lima area. An academic self-efficacy assessment was made of 284 students using General Academic Self-Efficacy Questionnaire. For the academic performance of every student, their registered weighted GPA was taken into account. The association between the study variables was established through the Pearson s Linear Correlation Coefficient relation coefficient which was both positive and significant. The current study used academic self-efficacy scale by Chemers, Hui, and Garcia (2001) and Pearson s Linear Correlation Coefficient to determine the relationship between academic self-efficacy and academic performance. This indicates the reliability of the connection between academic self-efficacy and academic performance.

In conformance with these studies, Nehal (2015) reported that a significant relationship between academic self-efficacy and academic achievement exists among students studied. Nevertheless, another longitudinal study by Mae, Hee, Choi, (2016) examined the causal relationship among Korean students' past academic performance, self-efficacy beliefs, and academic achievement. A representative sample of 1177 Korean students over a five-year period from the 8 to 12th grades was used for the study. Results indicated that the academic performance of students from the first semester of the 8th grade positively predicted self-efficacy beliefs and that self-efficacy beliefs from the second semester of the 8th grade

positively predicted the academic achievement of students for the first semester of the 9th grade; this pattern evidenced through to the 12th grade. A reciprocal relationship between self-efficacy beliefs and academic achievement was identified. These findings point to the importance of integrating the reciprocal model into practice and utilizing interventions targeting both self-efficacy and academic achievement.

In contrast with the above study is yet another research with university students was carried was out by Honike (2016). He conducted 12 years of research on the relationship between academic self-efficacy and university student's academic performance, and known cognitive and motivational variables that explain this relationship. Academic self-efficacy moderately correlated with academic performance. The sample was based on university students and there was need to compare the findings with the current secondary school students.

Still, Hannula, Bofah, Tuohilampi and Metsamuuronen (2014) study based on longitudinal data within the mathematics domain corroborated reciprocal effects between self-efficacy and achievement. He surveyed students over 7 years until the end of Grade 9, with intervals of at least 3 years between the measurements. In their study, the self-enhancement path from self-efficacy to achievement was stronger when students were older *($\beta = .16$* between Grade 3 and Grade 6, and *$\beta = .26$* between Grade 6 and Grade 9), whereas the skill development path from achievement to self-efficacy did not change as much (from $\beta = .34$ to $\beta = .30$). This makes it necessary for more studies to be conducted in all levels of schooling to establish the strongest association between academic self-efficacy and academic performance. The present study dealt with secondary school level and with form four students only.

Honicke and Broadbent's (2016) twelve years of research on the relationship between academic self-efficacy and university student's academic performance, and known cognitive and motivational variables explained and supported further this relationship. More studies done with university students at Zahedan University of Medical Sciences reported that individuals with higher self-efficacy have more ideal academic status compared to people with low self-efficacy. Another study showed a direct positive relationship between GPA and self-efficacy (Azizolla, Sadegh, Mahnaz, & Gholamreza, 2016).

Goulao (2014) examined the relationship between the academic self-efficacy of an adult learners group in an online learning context with their actual performance. Data were collected from 63 students of both genders, with average age of 42 years old, selected from the first years of their undergraduate studies. The data was analyzed using descriptive and inferential statistics. The Pearson correlation coefficient was used to determine the relationship between self-efficacy and academic performance. The analysis of the data indicated that students' level of self-efficacy is high (average = 45) and a significant relationship exists between self-efficacy and academic achievement *(r* = 0.286, at 0.05 level).

More investigation was done by Alyami, Abdullrahman and Ersanla (2017) with medical and dental tertiary students from Taif University and King Abdulaziz University in Saudi Arabia. They reported significant correlations between academic performance and academic self-efficacy, *rs (212) = .188, p =.003.* Further, the effect of self-efficacy as predictor of academic achievement was investigated by Hamid and Alasmari and Eldood (2015), the finding pointed out those students with higher levels of self-efficacy showed higher academic performance. These studies confirm the importance of self-efficacy in improving academic performance of all students irrespective of age, mode of learning, level of education and

courses undertaken. Efforts should therefore be made to avail self-efficacy enhancing intervention programs to students in order to ensure their academic success.

Koseoglu (2015) in his study investigated the issues of motivational inclinations, cognitive and meta-cognitive approaches and resource management abilities of Turkey university students in predicting academic achievement. A multivariate analysis of co-variance (MANCOVA) indicated that students with low self-efficacy were inclined to believe that intelligence is inherent and cannot be changed hence make no effort into improving themselves. It also indicated that students with high self-efficacy preferred mastery goals, which entailed challenges and new knowledge, as well as performance goals that comprised good grades and surpassing others. They were able to analyze and control their impulses and thrive in the face of challenge hence they excelled academically. It was also found that the relationship between self-efficacy and GPA was partially mediated by effort-regulation. These findings offer inferences for educators who may prefer to focus on the objective of increasing academic achievement by strengthening self-efficacy and effort-regulation. More studies should be done on the various sources of self-efficacy (mastery/ past experience, vicarious learning, verbal persuasion, psychological well being) and determine the most influential in determining academic success among students in Nairobi County which was not addressed in the present study.

According to Bandura (1997) domain-specific measures of perceived efficacy has a greater predictive power than global measures of the construct. For example mathematics is an interesting but a very challenging subject and several studies reported different factors which lead to students' poor performance in this subject. Hannon (2014) study found that students' self-efficacy was a strong predictor of performance on both high and low stakes mathematics

exams. This idea was confirmed by other authors (Simzar, Martinez, Rutherford, Domina & Conley, 2015).

Nyamwange's (2016) study on self-efficacy and achievement with (296) first year students selected from six universities in Kenya also reported that self-confidence or self-efficacy is a major predictor for achievement in science and mathematics. The current study focused on academic self-efficacy of the national examination taken by form four students in 2017. However more research is encouraged on specific subject's self-efficacy in order to devise a more subject friendly interventions.

In Kenya, Ochieng (2015) study among secondary schools' students in Nyakach Sub-County indicated that students with high self-efficacy perform better in Mathematics than those with lower self-efficacy. However, these findings were based on rural settings hence it was important to design a similar study in Kenya with urban settings in order to compare the results hence the current study. This is a clear indication that if a student has optimal abilities with appropriate incentives, the expectations about the efficacy will become an essential determining factor of the type of activity to be chosen by the student, how much effort will be made in the activity and how long efforts will be made to manage the stress producing behaviors and eventual academic performance.

Moreover, Ersanla's (2015) quantitative study on the relationship between the academic self-efficacy levels and language learning motivations of 8th graders in Turkey reported a relationship between self-efficacy and performance. This findings were reinforced by Gboyega and Abdullahi, (2015) study on academic Self-efficacy and gender as determinants of performance in English discourse writing among high achieving students in Ibadan, Oyo State. The findings revealed that academic self-efficacy had a positive relationship with performance in English discourse writing.

Academic self-efficacy is widely accepted as being both the cause and effect of academic achievement. However, empirical research using longitudinal data and domain-specific assessments is scarce and seems to be completely absent in other domains other than mathematics, biology, languages and chemistry. More research is needed in other subjects' areas of study in order to bring concession. The findings highlight the necessity of early interventions and a domain-specific approach. Based on these results, endorsements to improve the quality of teacher training on how to enhance self-efficacy in the various subjects can be of great help to the students especially in STEM which seems to challenge students in most secondary schools in Kenya. Nevertheless, there is a limited studies to date conducted in a secondary school context that measure the extent to which self-efficacy predict achievement making this study relevant.

Nonetheless, Gopolang (2014) research findings were not consisted with the previous outcomes. He studied the role of self-efficacy in academic performance with a sample of 100 students (18 - 36 years, mean = 21 years) selected from the University of Botswana through convenient sampling method. General Self-Efficacy Scales were used to measure self-esteem and self-efficacy and students' GPA were used to measure academic performance. The results revealed no significant relationships between academic performance and self-efficacy. Although 98.1 % of respondents reported that they could get good grades if they wanted to, only 12.2 % had a high GPA results. These different results could be attributed to the convenient sampling method which is subjective.

These findings therefore cannot be generalized to other regions. This study is consistent with Kingsley and Nnamdi (2014) who supported other researchers' findings on students' self-efficacy as a predictor of their academic achievement where they found a positive linear but

not significant relationship between self-efficacy and their academic performance. This argument is based on the fact that students may lack necessary self-regulatory skills that would enable them to match their self-efficacy with their achievement. According to Bandura (1987) high sense of efficacy may not end in behavior consistent with that belief, however, if the person also believes that the outcome of engaging in that behavior will have undesired effects. Matching self-efficacy with performance should therefore be taken with caution.

On the other hand, Tudy (2014) study found that only attitude and self-efficacy towards Mathematics manifested significant influence to academic performance. He discovered that students who have shown positive attitude towards the subject tend to perform well. Hence, performance in Mathematics can be improved by developing a positive attitude towards the subject. Parents, teachers and other stakeholders have the responsibility of helping the students in this aspect.

It is argued that adolescents internalize gender expectations as to what is "appropriate" male and female behavior in their gender ideology and this return affect subjects' choice, career aspirations, academic motivation and academic self-efficacy. Gender difference with regard to self-efficacy is considered an enquiry that deserves an intensive research in the field of educational psychology. Prior research has highlighted gender differences in academic self-efficacy and how these predict achievement for each gender mainly in post- secondary institutions of learning in developed countries.

A study by Azizolla *et al.,* (2016) with students of Zahedan University of Medical Sciences found significant relationship between gender and self-efficacy but in favor of females. Mohamed and Jamal (2017*)* study with secondary schools in Malaysia found female students

to be more optimistic when facing difficulties in their studies compared to male students. The findings showed that there is a difference between self-efficacy among male students (mean = 4.02) and female students (mean = 4.15), a value $t\ (586) = -2.50,\ p < 0.05$.

Pirmohamed , (2017) studied United Kingdom university students and observed that active learning strategies, performance goal, and self-efficacy were significant predictors of achievement for males, whereas self-efficacy was the only significant predictor of achievement for females. The present study probed students in public secondary schools which could bring invaluable comparisons and consensus. Indu, Ranjit and Shamshir (2017) study findings supported gender difference in academic self-efficacy. This indicate gender differences in various levels of schooling and mainly in favor of females hence the need to address the issue of low self-efficacy among the boy child in all stages of development. However, the discrepancies in these studies outcomes call for more research for clarification purposes.

Majority of past researches focusing on content domains showed that males have higher self-efficacy and motivation in the subjects of mathematics/science, and females have higher self-efficacy and motivation in the subject of English (reading/writing). In this respect, Karen, *et al.,* (2017) study with Mexican high school students noted that whereas men had higher self-efficacy feelings towards Math, Sciences and English as a second language; women showed higher self-efficacy in Spanish language.

Fallan and Opstad (2016) study examined how gender and gender-personality interactions separately affect self-efficacy by use of questionnaires based on Meyer-Briggs Type Indicator (MBTI) using university students. The study reveals that female students have significantly lower self-efficacy level than their male peers. However, this general conclusion does not hold for all gender-personality types. Lower self-efficacy level in economics for female

students compared to those of their male peers does only exist for female intuition and feeling (*NF*) and intuition and thinking students (*NT*), not for the female sensing and perceiving student (*SP)*. Furthermore, higher self-efficacy *level* for male students does only exist for male intuition and thinking students (*NT*) and not for male *NF* and *SP* students.

Female students have significantly lower self-efficacy strength than their male peers as well. However, this does only exist for female intuition and thinking (*NT*) and sensing and perceiving (*SP*) students, but not for female *NF* students. The general result that male students have significantly higher self-efficacy strength than their female peers does only encompass male intuition and thinking (*NT*) students and not the male *SP* and *NF* students. The main contributions of this study are showing the need to go beyond gender to get a more complete picture of the differences in self-efficacy between female and male students. We should be cautions to conclude that self-efficacy is uniformly affected by gender. Gender-personality interactions do matter. This study should be replicated in a future study with secondary schools students in Kenya for generalization purposes

Another study in a different field found a relationship between personality and self-efficacy. For example a study by Akitomo and Koichi Yaguchi (2014) examined the association between the five factor model of personality and exercise level and self-efficacy (SE) for exercise in older Japanese adults and found out that all domains of personality traits (extroversion, openness, agreeableness, and conscientiousness, neuroticism) were significantly correlated with self-efficacy for exercise. It is clear that both personality traits and self-efficacy beliefs have proved to be important predictors of academic achievement. Yet, most studies have addressed the contribution of personality traits and self-efficacy

beliefs to academic achievement separately, as independent one from another. More studies should be done on other personality traits theories for better comprehension of self-efficacy.

Other study findings found no gender differences in academic self-efficacy. Dullas (2018) research found no significant difference between male and female in their overall Academic Self-Efficacy. Furthermore a study by Tiyuri, et al., (2018) with postgraduate students found no significant difference in research self-efficacy score of students due to gender ($P = 0.754$) and school ($P = 0.364$). In support of these opposing views was Ibrahim and Ibrahim (2017) who examined the effect of self-efficacy, positive thinking and gender difference on academic achievement among university students in Saudi Arabia using 220 students. The outcome of the study showed no significant statistical gender difference among the study participants. Tiyuri*et al.,*(2016) study found no significant difference in relation to research self- efficacy among post- secondary students. The discrepancies of the findings could be attributed to social-contextual nature of academic self-concept.

In an effort to address the issue of gender and self-efficacy Kifle, Kassawand, Meles, and Astatke (2017) carried out a study in Ethiopia using 482 students in Woldia college of teachers education. The study employed correlation design and general academic self-efficacy scale was used to measure the levels of academic self-efficacy and students' cumulative GPA for academic achievement. The result of the study showed that there was statistically significant gender difference in students' general self- efficacy in favor of males. Other earlier research findings were consistent with some of the studies which had shown that boys were often found to have higher efficacy beliefs than girls.

In Kenya, Ochieng (2015) conducted a study among secondary schools' students in Nyakach Sub-County with an aim of examining self-efficacy and academic achievement from

mathematical perspective. The sample was 390 secondary school students. The results show that Self Efficacy levels and Academic Achievement of the students are average. Male students seem to have a higher Self–Efficacy than their female counterparts. This explains why female perform poorly in STEM subjects in Kenyan secondary schools. Programs are therefore necessary to instill a sense of self-efficacy in all students in subjects that are gender stereotyped. However, Aurah, (2017) found incongruous results after exploring the relationships between science self-efficacy, gender, and academic achievement among form four students in Kenya by use of 2,139 students . The findings indicated gender differences in both self- efficacy and academic achievement, with female students performing better than male students in both outcome variables. These findings are inconsistent with the extensive research done on gender differences where females always perform poorer than males in science-related courses hence the need for further studies. The current study studied students in urban settings and from different geographical and social orientations hence comparisons are inevitable.

The current study was done in public secondary schools and among students who were chronologically (mean of 18 years), developmentally and educationally different from the ones used in the previous studies making it complementary. Academic self-efficacy therefore provides confidence to control different academic situations and environments and that self-efficacy positively predicts performance beyond prior performance and ability. What is not disputed in most of the above literature is that self-efficacy influences academic performance of students. Nevertheless, empirical investigations have majored on higher institutions of learning. Owing to the scarcity of research literature both locally and internationally on academic self-efficacy in high school or rather secondary school students, it was therefore important for the present study to investigate on this phenomenon to this group of students.

The reviewed literature also revealed inconsistent results. For example some studies found a relationship between academic self-efficacy and academic performance (Bandura, 1997; Gun &Yildiz, 2014;Ibrahim& Ibrahim, 2017; Koloa, Munira, Wan & Nobaya, 2017;Karen, Camelo, Sanchez, and Pinto, 2017) and others found the relationship negligible or non-existent (Tudy , 2014; Gopolang, 2014).Gender difference was also found in some studies (Aurah, 2017;Ochieng, 2015) and missed in others (Tiyuri, et al., 2018; Dullas, 2018). Although Gender was not tested in this study, evidence was strong.

2.7 Theoretical Framework

Theoretical framework consists of two sub-sections. The first sub-section discusses the Self Determination Theory (Ryan & Deci, 1985**)** and the second one, the Social Cognitive Theory (Bandura, 1986). The two theories complemented each other in adequately addressing all the variables of this study and advancing their deeper understanding.

Bandura's (1986) Social Cognitive Theory focuses on academic self-efficacy which is consistent with Deci and Ryan Self Determination Theory on extrinsic and intrinsic motivations and their influence on students' academic performance. They have also highlighted the role of the environment (school type) in supporting academic excellence by enhancing and fulfilling psychological needs of the students which in turn impact on academic performance (Bandura, 1986; Ryan & Deci, 1985).

2.7.1 Self-Determination Theory

Self-determination theory (SDT: Deci & Ryan, 1985; Ryan & Deci, 2017) is a theory of human motivation that is extensively used is educational discipline to explain the determining factor of students' academic behavior or academic outcome. It underscores the degree to

which behaviors are relatively autonomous (the extent to which behaviors originate from the self) versus relatively controlled (the extent to which behaviors are pressured or coerced by intra psychic or interpersonal forces). SDT defines motivation as psychological energy directed at a particular goal. Many theories of human behavior only account for the direction of behavior, but miss to account for how that behavior is energized hence SDT theoretical approach is adopted for this study in order to explain fully the students' source of their academic outcome.

This theory highlighted the importance of psychological needs (autonomy, competence, and relatedness) which forms basis for self-motivation and consequently academic success. Autonomy is freedom from academic pressure, competence is the positive self-beliefs and relatedness is the sense of belonging to the school (Ryan & Deci, 2017). Therefore students will achieve optimum academic performance if these needs are fulfilled. The type of a school that is able to provide an environment rich in these psychological needs encourages academic success. Where these needs are denied, it leads to lessened motivation and well-being (Ryan & Deci, 2017;Lee ,2017; Noels, Chaffee, Lou & Dincer, 2016; Oga-Baldwin, Nakata, Parker, & Ryan, 2017; Deci & Ryan, 2014;Vallerand & Reid,1984). This suggests that educational stakeholders need to support these students' basic psychological needs by creating positive motivational school climate. In these study girls boarding schools exhibited the best academic performance in 2017 and the mixed day schools the worst. This could imply differential school climates in terms of the fulfillment of these psychological needs.

Deci and Ryan (1985, 2000) consider distinction of motivation through a continuum of increasing self-determination with three ultimate positions reflecting the degree of autonomy on which behaviors are based. These positions are intrinsic motivation, extrinsic motivation and Amotivation. This is illustrated in a continuum of self-regulation as indicated in Figure 1.

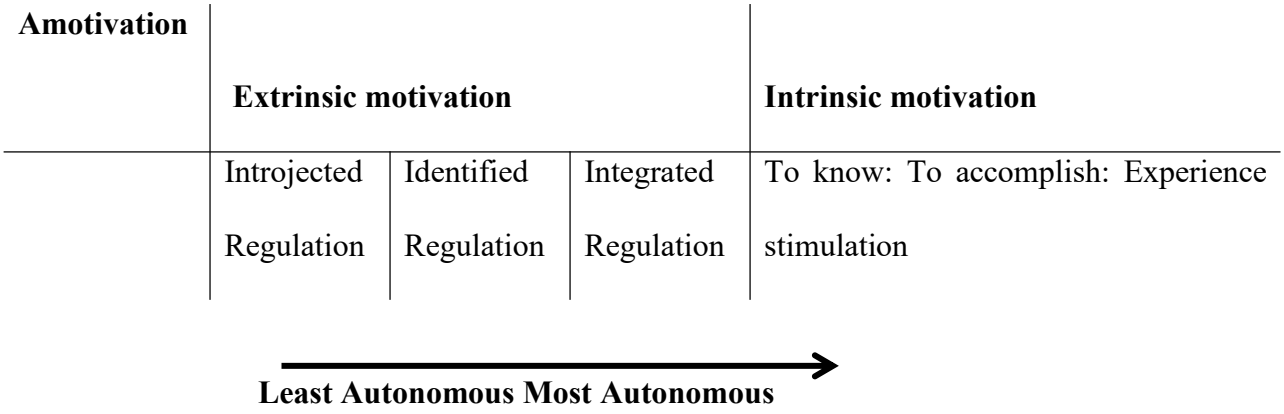


Figure 1: ***Self- Determination Continuum***
Adapted from Deci and Ryan (2000)

Intrinsic motivation is hypothesized as a drive that appears from within because of the inherent gratification of the activity itself. It represents the most self- determined element of motivation (Deci *et al.,* 1985; Ryan *et al.,* 2000). Consequently, a student who is intrinsically motivated willingly partake in academic activities with a sense of inherent curiosity, fun, and interest without expecting any rewards or external limitations and without undergoing external or internal pressures to do so (Deci and Ryan, 1985). Such behaviors are said to have an internal perceived locus of causality and such students have high sense career aspiration, academic motivation and self-efficacy leading to academic success (Ryan & Deci, 2000: Deci & Ryan, 1991; Deci & Ryan, 1995). This motivation should be encouraged among the students by providing the above stated psychological needs.

People fluctuate the level of motivation (how much motivation), and orientation of that motivation (what type of motivation).Therefore Vallerand *et al.,* (1992) supported the idea that intrinsic motivation can be divided into three more specific motives or domains such as: to know, to accomplish, and to experience stimulation. Intrinsic motivation to know is the engagement in an activity 'for the pleasure and satisfaction that one experiences while learning, exploring, or trying to understand something new' (Vallerand *et al,.*1992).This type

is related to constructs such as curiosity and exploration, and the epistemic need to know and to understand which a characteristic in educational settings. This encourages persistence in academic undertakings. Intrinsic motivation towards accomplishment is defined as commitment in an activity for the pleasure and satisfaction derived when trying to excel, to reach a new standard, or to create something new. Individual in this emphasis on results or grades after which the motivation dwindles. This motivation was more significantly related to academic performance in this study. Finally, intrinsic motivation to experience stimulation signifies involvement with an activity for the experience of fun, excitement, and positive feelings (Vallerand *et al*. 1992).

In divergence, extrinsic is prompted by external contingencies (Deci & Ryan, 1985) that is, external rewards and punishments, and to maintain socially important values. In this, students may be influenced by schools type one attend and other external factors towards their academic achievement. Three types of extrinsic motivation are defined in the self-determination theory in terms of 'what' and 'why' of goal pursuits: In this respect, there is external regulation, introjection, and identification (Deci and Ryan 2000). External regulation is the least autonomous and most representative type of extrinsic motivation whereby students study to obtain a reward like grades and to avoid a punishment or judgment. Such study habits are poorly maintained once the controlling contingencies are inhibited (Vansteenkiste, Simons, Lens, Sheldon, & Deci (2004).

The second type of extrinsic motivation is introjection, whereby studies are sanctioned to satisfy internal contingencies, such as self-importance/ ego involvement/ self-esteem or the avoidance of self-derogation (Deci and Ryan 2000). For example, student who originally studied to perform well on the exam will be driven by feeling of pride or to avoid feeling guilty for not having studied enough. In this study this motivation was significantly

associated with academic performance of the students. Identification is a more self-determined and autonomous type of extrinsic motivation because behaviors are esteemed and considered central and, thus, engagement is alleged as chosen by the individual itself (Deci and Ryan 2000). For example, a student might study hard because mastery of such information is important for future competence career. The most autonomous type of extrinsic motivation is integrated regulation, whereby those identified regulations have been amalgamated with other aspects of the self. For example, a student might study medicine since doing so allows her to enter a profession in which she can benefit those in needs, which is consistent with her steadfast values and interests.

Nonetheless, for motivation to be most operative there must be a balance of both extrinsic and intrinsic motivation. Extrinsic motivation helps students become self-driven and competitive, while intrinsic motivation supports looking for knowledge for its own sake (Deci and Ryan 2000). Eventually, fostering both types of motivation helps students enhance academic performance. Education stakeholders should manage the balance between intrinsic and extrinsic motivation whereby the students receive initial external rewards in order to increase their interests in subjects they are least interested in and over time, they might just cultivate their intrinsic motivation surrounding that subject (Tarver, 2018).

The third element of motivation identified in SDT is amotivation. It is the nonexistence of any self-determination (Deci & Ryan, 1985). An example of amamotive student is one who cannot really explain the reasons why he/she goes to school. Amotivated individuals do not have specific purposes and goals and do not exhibit the intent to engage in an academic activity. This disorder is related to learned helplessness, where individuals remove effort because of perceptions of ineffectiveness, incapability and loss of control. This individual has

no meaningful motivation for why a learning activity is useful (Deci and Ryan, 1985; Deci & Ryan, 2000). In the present study, a student who is amotivated has low levels of both academic motivation and academic self-efficacy prompting poor academic performance. The findings of this study showed that boys have higher levels of amotivation than girls which should be addressed by all education stakeholders.

2.7.2 Social Cognitive Theory of Self-efficacy by Bandura (1986,)

Results of findings have revealed that academic self-efficacy is a stronger predictor of academic success (Schunk & Zimmerman, 2002). This is depicted by Social Cognitive Theory (SCT) by Albert Bandura. The theory hypothesizes that learning happens in a social context with dynamic and reciprocal interaction of the person (self-efficacy), the behavior (performance), and the environment (teachers' feedback) in which the behavior is achieved in a Triadic Reciprocal Determinism model (Bandura, 1989) which is demonstrated in Figure 2.

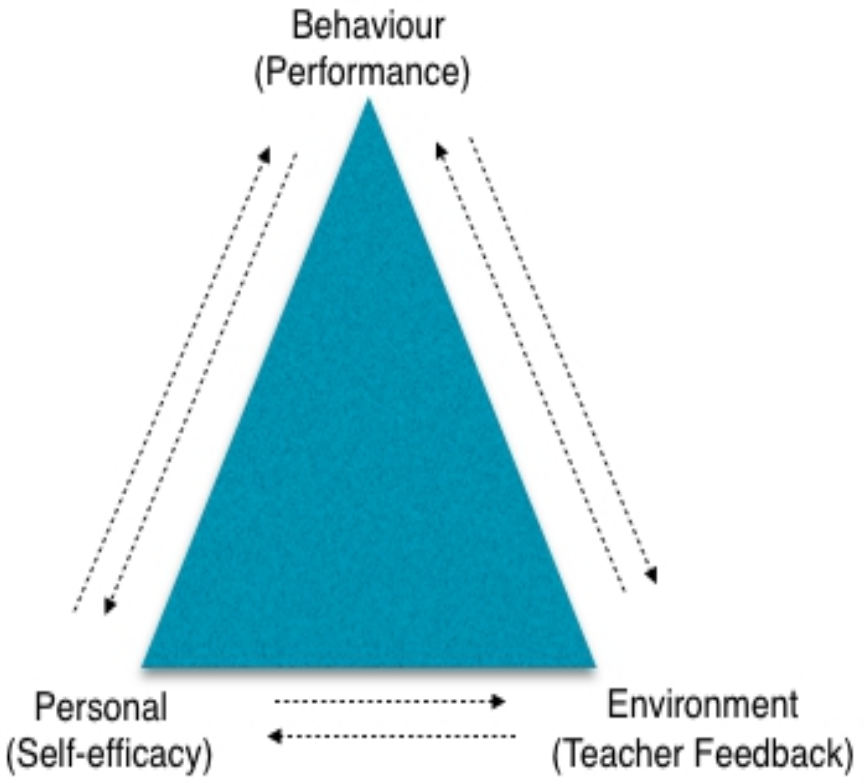


Figure 2: ***Overview of social cognitive theory and self-efficacy***
Adapted from Pajares (2002)

The feedback from behavior and environmental experiences will in return confirm or disconfirm students' beliefs leading to learning. The beliefs about the school one attend perception of one's abilities may constrain or augment academic motivation, career aspiration and academic performance. Because personalities function collectively as well as individually, self-efficacy is both a individual and a societal construct. Collective systems like schools develop a sense of collective efficacy like a group's shared belief in its capability to attain goals and accomplish desired tasks. For example, schools develop collective beliefs about the capability of their students to learn, of their teachers to teach hence empowering and vitalizing their students' academic success.

Bandura (1986) coined the term "self-efficacy" to describe people's inner beliefs about their ability to have an impact on occasions that affect their lives. Self-efficacy reflects confidence in the ability to exercise control over one's own motivation, behavior, and social environment. Students may have abilities and personal resources that allow them to perform well but to their judgment about what one can and cannot do with them matters most (Bandura, 1995; Chemers, Hu & Garcia, 2001). Schunk and Zimmerman (2008) recounted that there is a relationship between self-efficacy and academic motivation when choosing activities so that students with high beliefs in their capabilities will choose complex or challenging tasks while those students with low self-efficacy will tend to avoid them. Such students may also desire for careers that demand high entry grade which also facilitate academic motivation.

Self-efficacy theory advances that people acquire information to evaluate efficacy from various sources which are not tested in this study and future research is recommended. Such sources are; performance accomplishment, vicarious or observational experiences, social persuasion and emotional arousal/ psychological indexes Bandura (1986). People can develop high or low self-efficacy vicariously through other people's performance. If a person sees someone similar to them succeed, it can intensify their self-efficacy. Conversely, the opposite is also true; seeing someone similar fail can lower self-efficacy (Hebert et al., 201; Sarkhosh & Rezaee, 2014). This theory declares that students learn not only from their own experiences, but also by observing the actions of others and the benefits of those actions (Denler, Wolters & Benzon, 2014). Students should be exposed to role models who may offer extrinsic motivation and shape their self-beliefs and careers aspirations. Teachers should be trained to teach and become such role models.

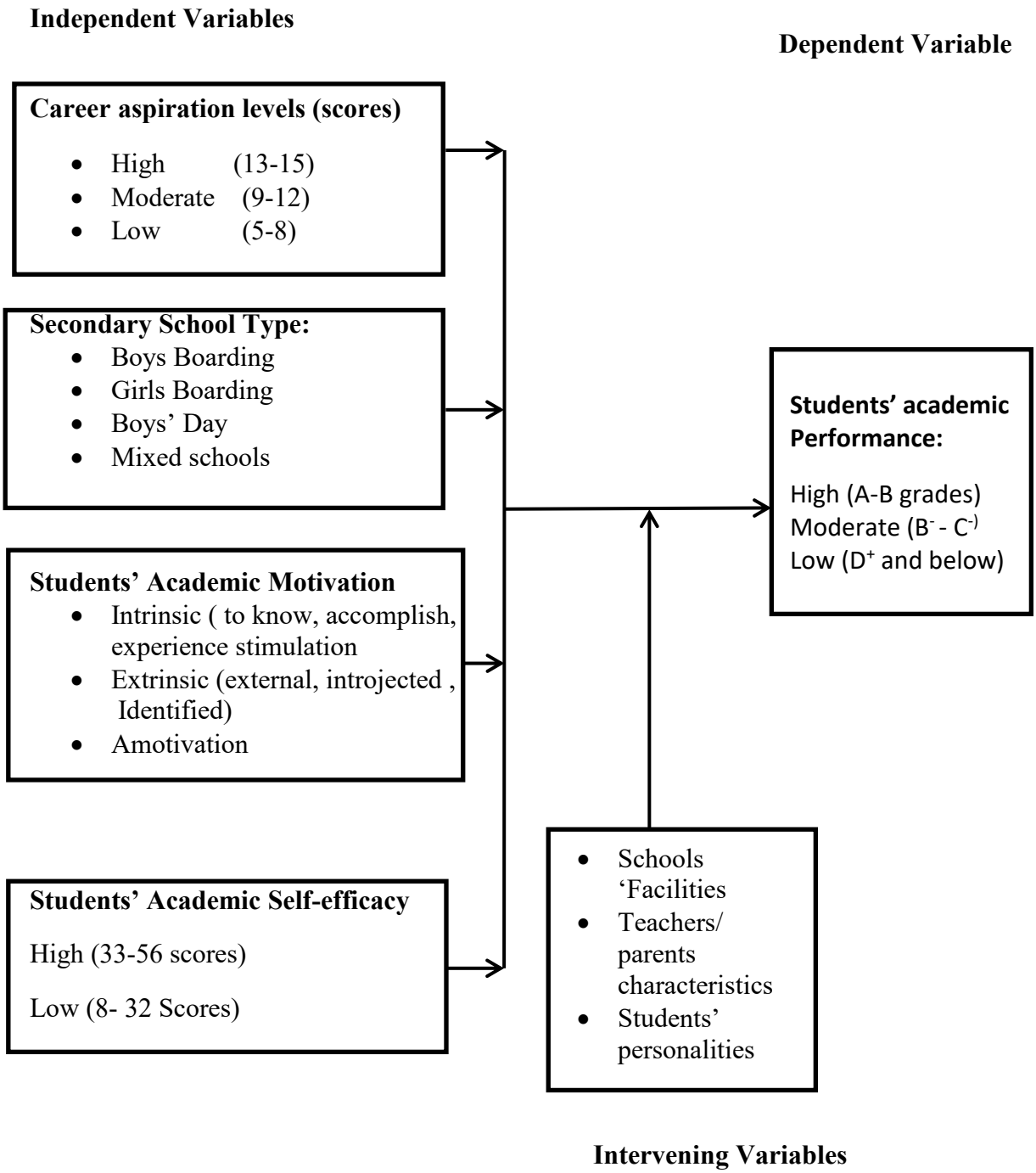
According to Redmond (2010), self-efficacy is also influenced by verbal persuasions in form of encouragement and discouragement pertaining to an individual's performance or ability to perform (Hebert, Kulkin, & Ahn, 2014). However, verbal persuasion is a weaker source of self-efficacy beliefs than performance outcomes, but it can be widely used because of its ease and ready availability for all education stakeholders. For the source of emotional arousal, it involves sensations people experience from their body and how they perceive this emotional arousal influences their beliefs of efficacy (Bandura, 1977). By learning how to manage stress and lift mood when facing challenging tasks, students can improve their belief in self-efficacy (Banfield & Wilkerson, 2014). Students need information on how to deal with academic and life challenges. They should also be encouraged to seek guidance and counseling for further empowerment.

Performance outcomes or past experiences and also referred as mastery of experience is the most significant source of self-efficacy (Zeidmane &Rubin, 2017). The school should offer varied activities where there is likelihood of success so as to enhance their self-beliefs. The students' potentials should be not be based singly on academic performance but also on other non-academic attainments (Bandura, 1977) to avoid instances of overall failure in the learning experiences which undermines one's belief of efficacy (Sarkhosh & Rezaee, 2014).

The school experiences seemingly form a significant determinant towards inspiring a sense of hard work and eventually better academic performance. The schools therefore should expose the students to all this sources of self-efficacy and also create environment for success. Therefore schools should provide opportunities for experiencing success, role models, minimizes failures, and persuade students to work harder in their studies which predetermines the academic success for self-efficacy determine the academic behavior which directly affects the performance outcomes.

2.8 Conceptual Framework

In the preceding description of the problem examined in this study, and the theoretical procedures to the study, the following conceptual framework, as shown in Figure 2.3 was developed by the researcher to support in the perceived relationships between independent and dependent variables of the study. The conceptual framework explains the anticipated interplay and relationship between independent and dependent variables. A school type, career aspiration, levels of academic motivation and academic self-efficacy may influence the students' academic performance. Conversely, school type, career aspiration, academic motivation and academic self-efficacy may impede academic performance. Students with high career aspiration, academic motivation and self-efficacy braces up, meets the academic thoroughness and excels in school work because he or she perceives himself or herself as being proficient of doing well in school. Conversely, low levels of career aspiration, academic motivation and self-efficacy may inhibit good academic performance because of the students' tendency to perceive themselves as being unable to cope with the academic challenges. All these relationships are demonstrated in Figure 2.3 and were statistically tested in this study. The levels of students' career aspiration, academic motivation and academic self-efficacy may have a reciprocal influence which was not tested in the current study



Key

⟶ Direction of relationship

Figure 3: ***Conceptual Framework***
Source: Researcher's Conceptualization, (2018)

2.6 Summary and Gap Identification

Overall, the sample characteristics of the research literature reviewed showed that majority of the studies were conducted in overseas countries and on post – secondary schools students. Little has been done on the above variables on secondary students and in developing countries. The current study was carried out on secondary schools' students in a developing country. Furthermore, research findings reported on the relationship between the predictor variables (career aspiration, school type, academic motivation and academic self- efficacy) and academic performance showed some relationships, others indicated none, while others have focused on specific subject domains and found contradictory and inconclusive outcomes. Thus, there was need for more studies to be conducted in secondary schools in Kenya, in order to augment more understanding of the importance of the determinants of career aspiration in predicting academic performance of the students.

However based on the literature reviewed it was found out that there was a significant prediction equation of academic performance from career aspiration, school type, academic motivation, and academic self- efficacy. There was also a gender difference in career aspiration, academic motivation and in academic self-efficacy although it was not tested in this study but literature review implied so.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents a description of research methodology, more specifically research design, variables for the study, location of the study, population, sampling procedures and sample size, determination of sample size, research instruments, validity and reliability of the research instruments, pilot study, data collection procedures, logistical and ethical considerations ,and finally data analysis.

3.2 Research Design

The correlation design was adopted for this study. It is a type of non-experimental research where a researcher seeks to understand what kind of relationships naturally occurring variables have with one another. In this study correlation design was used to determine the relationship between career aspirations, school type, academic motivation and academic self-efficacy of the students. Gender difference in career aspirations, academic motivation and academic self-efficacy was also established. Correlation design permitted the researcher to measure the degree and direction of these relationships among these variables as well as making predictions about one variable from the other. The degree of correlation relationship is expressed as a correlation co-efficient (Mugenda & Mugenda, 2003) and it range from -1.00 to +1.00. Positive correlation between two variables mean that an increase in one variable leads to an increase in the other and a decrease in one leads to a decrease in the other while negative correlation depict that an increase in one variable leads to a decrease in another and vice versa.

The design however does not allow the explanation of cause and effect relationship between determinants of career aspirations and academic performance. In other words, this research is not intended to determine whether or not determinants of career aspirations are a motivator for academic performance but the purpose is rather to identify the relationship of the said determinants of career aspirations and academic success of students in public secondary schools in Nairobi County.

3.3 Location of the Study

The study was carried out in Nairobi County which is the capital and largest city in Kenya. Nairobi County has witnessed a growing cosmopolitan population of 3,138,369 with a projection of 4,253,330 population by 2017 making it the most populous city in East Africa with an area of 696 km² and a population density of 4,509/ km².This represent a growth rate of 11.2 per cent annually (KNBS, 2014). It is marked by higher concentrations of poverty and affluence, greater racial and ethnic diversity, larger concentrations of immigrant populations and linguistic diversity, and more frequent rates of student mobility. All these make Nairobi a cosmopolitan city with a heterogeneous population with diverse social-economic background which allows valid comparison and generalization of the findings on the relationship between the determinants of career aspirations and academic performance to other regions. It also gives abroad view and balanced information on the interaction of these variables under study.

Nairobi city is a business hub with intensive formal and informal employment making it necessary to investigate how well students are prepared for the numerous and emerging employment opportunities available to them through academic performance. Students' exposure to formal and informal work, technological advancement like mass and electronic media, entertainment spots, and interesting commercial promotions is likely to influence

career aspiration, academic motivation, and academic self-efficacy and consequently inspire academic performance.

It is in record that 2009, 2010 and 2011 K.C.S.E statistics indicates that, out of the maximum 12 points, the Nairobi County combined mean score was approximately 6 which is the equivalent to a mean grade of C (KNEC, 2017).Accordingly, 2013, 2014, 2015, 2016 and 2017 K.C.S.E statistics shows that out of the maximum 12 points, the Nairobi County combined mean score was declined to 5 which is the equivalent to a mean grade of D^{+} (KNEC). Given that the minimum mean grade for university admission is C+, the general academic achievement of students in public secondary schools in Nairobi County may considered to be poor by many stakeholders in the education sector who expect secondary school students to excel in their studies and later on join universities and other post-secondary institutions of learning in order to be transformed to skilled manpower for economic productivity.

3.4 Target Population

In total, there are 84 public secondary at the time of this study in Nairobi County with a total population of 108, 818 students (Nairobi County Director of Education, 2018). These school ranges from well-established single-sex national schools to poorly developed 42 sub-county or mixed schools which are the majority and admit bulk of the students. This gives a diversity of distinct school type with diverse academic performance. The target population for this study comprised of form four candidates in Nairobi County who had registered for the final Kenya National Examinations Council (KNEC) examinations for year 2017. The KNEC nominal roll for 2017 gave a total of 26477 registered candidates for 2017 examinations (KNEC, 2017) from which the sample was drawn.

The accessible population was 9,826 form four students from the 12 sampled schools. The choice of the schools was based on the fact that they presented form four candidates in the national examinations in 2017. The choice of this group was also based on the assumption that the form four students are senior students in these schools having been in high school for at least four years hence they have internalized levels of career aspiration, academic motivation and academic self-efficacy which will lead to their career pathways for which they are preparing through K.C.S.E examination.

3.5 Sample Size Determination and Sampling Procedure

The actual sample size of the schools and the study participants is presented in Table 1.

Table 1:
Sampling Frame

	Population					**Sample Size**	
	Schools:	**Students :**			**Total**	**Students**	**Total**
Type of School		**Boys**	**Girls**	**Schools**	**Students**	**Boys**	**Girls**
Boys Boarding	14(16.7%)	2464	-	2	2464	100(25%)	-
Girls Boarding	23(27.4%)	-	2907	3	2907	-	118(29.7%)
Boys Day	5(5.9%)	496	-	1	496	20(5%)	-
Girls Day	-	-	-	-	-	–	-
Mixed Day	42(50%)	5,551	1592	6	3959	95(24%)	64(16%)
mixed Boarding	-	-	-	-	-	-	-
Sub-total	**84**	**5327 (54.21%)**	**4499 (45.78%)**	12 **14.28%**	**9826 (100%)**	**215 (54.2%)**	**182 (45.84%)**
Total	**84(100%)**						**397**

Note. N = 397.

Source: Nairobi County Director of Education Office

Three types of sampling procedures were employed; purposive sampling, stratified sampling and simple random sampling. Purposive sampling was used to select study location, public secondary schools and form four students. The eligibility criteria for the schools that were purposely selected is that they had to have students registered to sit for KCSE in 2017 which is prepared, administered and evaluated by Kenya National Examination Council (KNEC). These schools were further stratified into four categories representing boys' boarding, boys' day, girls' boarding, and mixed day schools.

Simple random sampling was used to select two boarding schools for boys, three boarding schools for girls, one day schools for boys and six mixed day schools. In total, 12 out of 84 schools were selected for the study. This represents 14 % of the total numbers of public secondary schools in Nairobi County which is considered enough in social science study which recommend a minimum of 10% (Gay, 1981).The schools were distributed proportionately by means of multiplying each group size in every category by the schools' sample size (12) and divide by the total number of public schools (84). The resultant figures are shown in Table 1.

The sample consisted of 397 participants and which was obtained through simple random sampling procedures using Yamane (1967) formula for determining a sample size. This formula allows the calculation of an ideal sample size given desired level of precision, confidence level, and estimate of the attribute present in the population. This formula is also considered appropriate for a large and known population size. The Yamane formula is stated as:

$$n = \frac{\mathrm{N}}{1 + N\{e\}^2}$$

Where n is the corrected sample size,

N is the population size (24,677) and

e (0.05) is the desired level of precision (margin of error).

A 95% level of confidence is assumed. Calculation of sample size was done as follows:

$$n = \frac{26477}{1 + \{26477\ X\ 0.0025\}} = 394$$

A sample size of 397 respondents was adopted for the study. This is more than the 374 respondents recommended by Yamane (1967) as per his formula.

To get the required number of participants per school, the researcher first prepared paper folds equivalent to the total number of form four students in the school. The paper folds equal to the targeted number of participants in the school were written 'yes' and the rest left blank. The papers were then placed in a basket and thoroughly shuffled. The students who were in their classroom were asked to pick a paper fold randomly. Those students who picked paper folds written 'yes' were requested to remain behind to responded to questionnaires while others were released.

To achieve a proportional allocation strategy, the size of the sample in each stratum is taken in proportion to the size of the stratum; the entire sample size (397) was divided by population size of the form 4 students in the sampled schools (9,782), and then multiplied by layer/ stratum in the specific category of school. More specifically, a total of 100 participants were selected from the boy's boarding schools, that is, 50 participants from each school. In the girls' boarding category, 59 girls were selected from each school, giving a total of 118. A total of 20 participants were selected from the boys' day category. Finally, in the mixed day category, a total of 96 boys and 64 girls were selected to participate in the study. The total number of respondents yielded a figure of 397 who participated in the study. This sample was

drawn from form four classes of the selected schools, since the study was designed to use this class of students. Simple random sampling, and in the cases of mixed schools, stratified random sampling techniques were used to select the study participants.

3.6 Research Instruments

The tools of this study were questionnaire and document analysis for 2017 KCSE results.

3.6.1 Students' Questionnaires

A pilot study was conducted in order to ascertain the validity and reliability of these questionnaires. The questionnaire was used to collect data on the participants' demographic characteristics, career aspiration, academic motivation and academic self- efficacy. To overcome the flaws of self-report, comprehension and return rate, the questionnaires were made clear and simple while the respondents were assured anonymity and confidentiality. They questionnaires were divided into four parts. Part I consisted of questions on the participant's background information (admission number, index number, residential status, and gender), school **c**haracteristics (name of school, category of the school, that is whether it is National, Extra- County, County or Sub-County, type of school, that is, whether boys' boarding, girls' boarding, boys' day or mixed/ co-education). The other 3 parts of the questionnaires addressed the variables of the study as stipulated in the objectives: academic motivation, self-efficacy, and career aspiration.

To be specific, part II sought information on participants' career aspiration based on 5 items in the questionnaire represented by questions 8, 9, 10, 11 and 12. Items 8 and 9 are positive while 10, 11 and 12 are negative. The scoring of positive items was done by giving a score 3, 1, 2 for 'Yes', 'No' and 'Not sure' respectively. Participants were asked questions such as "I will seek to pursue a University degree after Form 4 examinations". The negative items were

scored by giving a score 1, 2, 3 for 'Yes', 'No sure' and 'No' respectively. Participants were asked negative questions like" I will seek direct employment after form 4 KCSE examinations". Thus the maximum score that can be obtained by a respondent is 15 and minimum is 5. The total score obtained by each respondent were corresponded to any of the three levels of career aspiration as follows: low (5-8), moderate (9-12), high (13-15).'

Part III comprised of the Academic Motivation Scale which was measured by the Academic Motivation Scale (High School version) developed by Vallerand *et al.,* (1992). The researcher sought permission of the use of this scale from the Mutwelele (2014) who had sought consent from the authors. Using information from the pilot study, the items which were in the original AMS was modified to fit into the participants' context. For instance, item number 21 on the AMS was modified to include a K.C.S.E certificate instead of high school degree which as it was in the original scale. According to Vallerand, *et al.,* (1992), the AMS is based on self-determination theory and has 28-items divided into seven sub scales, reflecting one sub scale of amotivation, three ordered sub scales of extrinsic motivation (external, introjected, and identified regulation), and three distinct, ordered sub scales of intrinsic motivation (intrinsic motivation to know, to accomplish things, and to experience stimulation).

The items in each sub scale were rated on a seven point scale ranging from 1 = totally disagree to 7 = totally agree. Academic motivation scores ranges from -18 and 18. A high score therefore on a sub scale indicated high endorsement of that particular type of academic motivation. A high score on a sub scale indicated high endorsement of that particular type of academic motivation. A full description of the scale and the scoring procedure is given in appendix III. The content validity of the AMS was ensured through peer review whereby only items which were relevant to academic motivation were included. Vallerand *et al.,* (1992)

reported that the AMS had construct validity which was determined by assessing correlations of the sub scales and correlations between the sub scales and motivational antecedents and consequences. The internal consistency for the seven sub scales assessed during the development of the English version of AMS, was found to be between 0.83 and 0.86. Given that these reliability coefficients were obtained using a sample in developed countries, the pilot study was used to determine the internal consistency of the instruments for the current sample and location in a developing country. Analysis of reliability for the current study for AMS using Cronbach's alpha was found to be 0.86.

Part IV was composed academic self-efficacy items. The scale consists of 8 items which were all positive on a 7 point Likert-type scale. Participants were asked to rate their agreement with statements reflecting their level of confidence in their perceived capability or competence to complete their class work or perform certain academic tasks. A sample item is as follows; "I know how to schedule my time to accomplish my tasks". The response scale ranged from 1 (Very Untrue) to 7 (Very True). Thus the maximum score that can be obtained by a respondent is 56 and minimum is 8. The total score obtained by each respondent was calculated and the statistical constants for the distribution were found out. Participants who scored between 33 and 56 were be deemed as having high academic self-efficacy. Participants who scored between 8 and 32 were deemed as having low academic self-efficacy. Participants were asked questions such as "I know how to schedule my time to accomplish my tasks".

Chemers *et al.* (2001) in their study using Academic Self-Efficacy scale to predict the effects of academic self-efficacy on GPA found a positive correlation between academic self-efficacy and GPA. Although a correlation was established between academic self-efficacy and GPA, no causal relationships can be inferred. Chemers et al. (2001) obtained a

Cronbach's alpha reliability coefficient of .81 for the scale in their study of 373 undergraduates. In this study, the average internal consistency reliability as determined by the Cronbach's alpha for all the sub scale of academic motivation was α = .762 for 397 respondents. This figure is higher than 0.70, which is the generally agreed lower limit for Cronbach's alpha meaning the internal consistency of the items related to self-efficacy was good.

3.6.2 Document Analysis

Finally, the 2017 KCSE national examinations aggregate grades obtained by students who participated in the study were used to depict their levels of academic performance as high (A^- and above), moderate level (B - C^-) and low level (D^+ and below). This document was accessed from the various secondary schools from which the respondents were drawn during the second phase of data collection.

3.7 Pilot Study

Research instruments that is, the questionnaires were piloted before they were administered to the respondents. The pilot study was carried out on a random sample of 40 form four students (20 boys and 20 girls) from a mixed day public secondary schools in Nairobi County which is similar (identical) to the actual sample. This school was purposely sampled and was not included in the main study. The pilot study was done in order to pretest the questionnaire for the purposes of ensuring clarity of instructions (Mugenda and Mugenda, 2003). Pilot study also helped to determine the validity and reliability of the items in the questionnaire and to understand the logistics issues of the study such as time that students were supposed to take to respond to the items in the questionnaire.

For the purpose of ascertaining pilot study, 10% of the total sample size was used (Orodho, 2004). The sample size for the study had been instituted as totaling to 397 form four students

and 10% of this sample size yielded approximately 40 students. The pilot study was carried out in early September, 2017, approximately one month before the full commencement of KCSE national examinations. The researcher visited the sampled school and after creating a rapport with the students and class teachers, started undertaking the pilot study. With the assistance of class teachers, stratified and simple random sampling technique was used respectively to select 20 boys and 20 girls from form four classes for the pilot study.

In simple random sampling procedure, the form four students were divided into two groups based on their gender. They were then given pieces of papers to indicate their KCSE registration number, folded them and returned the papers to the researcher. The researcher shuffled the papers separately in their respective groupings, and randomly picked up to 20 papers from each group. He called out the admission numbers of those who had been selected to remain for the pilot study purposes.

The researcher then explained the purpose of the study to the selected students and issued them with the questionnaires to fill. He appealed to the respondents to indicate areas that were not unclear. The researcher oversaw this exercise. The students took about 45 minutes to complete filling the questionnaire after which researcher collected the questionnaires and passed a vote of thanks to the respondents, the class teachers and the school administration for helping her to carry out the pilot study. These questionnaires were then later subjected to both qualitative and statistical analysis for the purpose of ascertaining validity and reliability respectively.

The information from the pilot study helped to modify the items in the original AMS which were not relevant to the participants of the study. For instance, item number 21 on the extrinsic motivation- external regulation in the AMS was adjusted to include a K.C.S.E

certificate as opposed to the high school degree which was in the original scale. The questionnaire for career aspiration was so limited to five items, two of which were positive and three negative.

3.8 Validity of the instrument

For the purpose of this study, face, content and construct validity which are non-statistical methods were used to validate the content and instruments employed in the research instrument (Orodho, 2012). Towards this end, the researcher ensured face validity by evaluating the appearance of the questionnaire in terms of feasibility, readability, consistency of style and formatting, and the clarity of the language used. It was certified that the selection of questionnaire items was done by considering every item alongside the stated study objectives and variables (Gatumu, 2008). To facilitate content validity, the researcher sought the input of professional guidance from research experts comprising of university supervisors who ascertained that the test items are relevant and contain the desired content domain. They also confirmed construct validity by attesting that the test items relates as they should be to other tests of similar variables with which it should theoretically correlate and that the test measured the constructs they claimed to be measuring. Necessary corrections and adjustments were then made to the instruments before they were used in the actual collection of data in the field. The tools were also pre-tested during pilot study and the responses were reviewed according to the objectives. To ensure external validity the researcher used random sampling techniques to select respondents in order to guarantee representational and allow generalization of the results to other populations which shares similar characteristics as the sample.

3.9 Reliability of the Research Instrument

Reliability of the instruments is the extent to which items on the test or instruments measure the same phenomenon (Tavokol and Dennick, 2011). A good research instrument should have a reasonable reliability coefficient for it to be scientifically fit for use in data collection (Ochieng, 2015). To ensure reliability, pre-testing of instruments was done during the pilot study**.** The reliability was calculated using Cronbach's alpha which is a measure of internal consistency, that is, how closely related a set of items are as a group. It is the most common and widely used measure for internal consistency in qualitative research with continuous and non-dichotomous data and where attitude instruments uses the Likert scale. Cronbach's alpha can be written as a function of the number of test items and the average inter-correlation among the items. Below, for conceptual purposes, we show the formula for the Cronbach's alpha:

$$\alpha = \frac{\mathrm{N}.\bar{c}}{\bar{v} + (N-1)\cdot\bar{c}}$$

Where N is equal to the number of items,

c-bar is the average inter-item covariance among the items and

v-bar equals the average variance whose maximum value is 1, and usually its minimum is 0, although it can be negative.

The Reliability of the AMS was reported by Vallerand *et al.,* (1992). The internal consistency for the seven sub scales assessed during the development of 47 the English version of AMS, was found to be between 0.83 and 0.86. Given that these reliability coefficients were obtained using a sample in developed countries, the pilot study was used to determine the internal consistency of the instruments for the current sample and location in a developing country. The seven sub scales seen in Table 3.2, show good reliability although less than those

measured by Vallerand *et al,* (1992). The reliability for academic motivation domains combined were .762 for all the 28 items. These reliability co-efficient were considered to be high enough to warrant the use of the Academic Motivation Scale in the local settings. The reliability obtained using measures of internal consistency; more specifically the Cronbach's Alpha reliability for all the items used in this study are also given in Table 2.

Table 2:

Reliability Coefficients for each Sub-scale

Scales	**Number of items**	**Cronbach's alpha (α)**
Academic Motivation Sub-scales		
Intrinsic motivation to know	4	.777
Intrinsic motivation to accomplish	4	.711
Intrinsic motivation to experience stimulation	4	.780
Extrinsic motivation- Identified regulation	4	.785
Extrinsic motivation- introjected regulation	4	.805
Extrinsic motivation- external regulation	4	.754
Amotivation	4	.721
Career aspiration	5	.794
Academic Self-efficacy	8	.822

Note. N = 40

A commonly accepted rule of thumb is that an alpha of 0.7 indicates acceptable reliability and 0.8 or higher indicates good reliability. As shown in table 2, the result of the reliability measure for all the 4 sets of research instruments was good for career aspiration (.794), academic motivation scale (0.762) and academic self-efficacy scale (.822). All the items in this survey were therefore internally consistent and reliable to assess variables of the study.

The validity and reliability of KCSE examinations, which is a national public exam has always been ascertained and assured by the Kenya National Examination Council (KNEC), which has the full mandate of the Government of Kenya to manage and certify all the schools and post schools examinations with the exception at the university level (KNEC, 2013). The

Council evaluates learning achievements in a way that is nationally and internationally acceptable and certification standards are safeguarded.

According Mukolwe (2015) citing Mwanyumba and Mutwiri, (2009) examination validity, reliability, efficiency, equity and standardized administration and scoring of the exam is therefore assured through the council. The exam are handled under very secure conditions and treated with ultimate confidentiality to ensure that no one obtains undue advantage; the Council thus ensures overall quality of exam in a multicultural society like Kenya (KNEC, 2013; Mwanyumba & Mutwiri, 2009). This exam therefore acts as equalizing force by providing objective data point with which to compare secondary schools' students and schools' performance.

3.10 Data Collection Procedures

Permission to collect data was procured through the school's administration. The researcher personally visited all the 12 sampled schools and secured appointment to administer the questionnaire to the respondents. Dates and venue for this exercise was agreed upon. The principals contacted the individual class teachers to allow the researcher to gather data from their respective classes. There were two data collection phases involving filling of questionnaire and second collecting the participants' KCSE results. During the data collection exercise of filling of questionnaire, the researcher acquainted class teachers with the procedures and requested them to assist in coordinating and supervising the students in filling the questionnaires. This was done four weeks prior to the commencement of the main KCSE national examinations. This was in September, 2017.

The researcher then explained to students the purpose of the study, its benefits and then addressed all the queries from the students as part of data quality assurance. The researcher

issued and read informed consent (*Appendix A*) forms to the selected participants. The researcher then issued and read informed consent (*Appendix A*) forms to the selected participants. The participants then signed the consent forms after agreeing to voluntarily participate in the study and returned them to the researcher. The administration of the instruments was done in the classrooms during learning hours so as to minimize cases of the students losing questionnaires or being influenced by other respondents. The questionnaires were then distributed to the selected students by the researcher with the help of class teachers. The researcher ensured that the participants responded to all the items before collecting the completed questionnaire. Afterwards, the researcher collected the filled questionnaires from students, and appreciated their participation as well as the class teachers and Principals for their assistance and co-operation. The entire data collection exercise lasted for about 3 weeks while in each school, this exercise lasted between 35 and 45 minutes. The Principals were reminded of the researcher's revisit to the schools upon the release of the 2017 KCSE national examination results to obtain aggregate points and grades for students who participated in the study.

The second level of data collection took place after the announcement of the 2017 KCSE national examination results in January, 2018. The researcher revisited the schools and repeated the ethical protocol of creating rapport and assurance of confidentiality of the examination results. This exercise was quite procedural and lasted for about two months. This is because students' examination results are usually treated with ultimate sensitivity and confidentiality and some school administrations that were unhappy with their poor performance were ambivalent to disclose it. Nevertheless, the researcher was able to access all the KCSE aggregate points and grades of the participants. The researcher began data processing procedures of coding, entry, cleaning and analysis, and report writing.

3.11 Data Analysis

Quantitative data obtained from the questionnaire were then scored and coded for statistical analysis using the computer using Statistical Packages for Social Sciences – SPSS – software. After data entry, coding and editing was done, descriptive statistics, that is, percentages, frequencies, means, range, standard deviations and skewness were used to describe the characteristics of the participants and summarize the data collected with reference to the objectives of the study. Inferential statistical methods of data analysis were then used in the presentation of the findings. The null hypotheses were tested at.05 level of significance using inferential statistical test as follow:

H_{01} : There is no statistically significant relationship between levels of career aspiration and academic performance of the public secondary schools' students in Nairobi County. Statistical test for this hypothesis was chi-squire test.

H_{02}: There is no statistically significant relationship between school type and academic performance of the public secondary schools' students in Nairobi County. Statistical test for this hypothesis was chi-squire test

H_{03}: There is no statistically significant relationship between academic motivation and academic performance of public secondary schools' students in Nairobi County. Statistical test for this hypothesis was Pearson Moment Product Correlation test.

$H_{04:}$ There is no statistically significant relationship between academic self-efficacy and academic performance of the public secondary schools' students in Nairobi County. Statistical test for this hypothesis was Pearson Moment Product Correlation test.

3.12 Logistical Considerations

After the researcher was cleared by Masaai Mara University Graduate School, she proceeded to seek permission from the National Commission for Science, Technology and Innovation (NACOSTI) upon which a permit was granted .This permit allowed the researcher to seek permission from the Nairobi County Director of Education. The researcher visited the sampled schools to acquaint herself with the school, create rapport with schools' administration before the actual data collection. During this visit, permission from the principals to collect data within their institutions was secured and the purpose of the data collected, dates, time of data collection and expectations were agreed upon

3.13 Ethical consideration

The ethical considerations that were observed in this study included obtaining research letter and permit from Maasai Mara graduate schools (appendix F) and the National Council for Science, Technology and Innovation – NACOSTI (Appendix H) respectively. The researcher also sought for further permission from the Nairobi County Director of Education Office. (Appendix G). She obtained consent from schools' principals of the sampled schools and created also created a rapport with teachers and students of these schools. The participants were assured confidentiality which was achieved by keeping their names anonymous. Students were also guaranteed that the data collected and research findings will only be used for the purpose of this study.

To ensure anonymity and privacy, no identifying information were be included in the questionnaire and only the students KCSE index numbers were used instead of their actual names. There was preamble to the questionnaire explaining the purpose and nature of the study, what the participants were required to do and the potential benefits of the study. In addition, the researcher assured the participants that there were no risks involved in this study.

Volunteerism in the study was respected by way of ensuring that each participant filled in a consent form in advance to accept to be involved in the study and withdrew if they so wished (Appendix A).

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND DISCUSSION

4.1 Introduction

This chapter contains the findings of this study on the relationship between correlates of career aspiration and academic performance of students in public secondary schools in Nairobi County, Kenya. The results of the study were presented in line with the objectives of the study. The relevant descriptive statistics for each objective is given, followed by the specific inferential statistics used to test the null hypothesis stated in order to achieve the study objective. The data is presented using frequency distribution tables and figures. Chi-square statistics and Pearson Moment Product were used in statistical hypotheses testing. Finally, a discussion of the findings was given in view of the reviewed related literature and theoretical linkages between the relevant variables. The chapter is organized into; the introduction, demographic information, findings for the stated objectives and hypotheses, interpretations and discussion of the findings. Presentation of findings, interpretations and discussions were related to the following objectives and hypotheses.

i. Determine if there is any relationship between the levels of career aspiration and academic performance. $H_{02:}$ There is no statistically significant relationship between the levels of career aspiration and academic performance of the public secondary schools' students in Nairobi County - was tested using chi-squire test.

ii. Find out if the school type was a factor influencing students' academic performance. H_{02}: There is no statistically significant relationship between school type and academic performance of the public secondary schools' students in Nairobi County – was tested using chi-squire test.

iii. Investigate if there is any relationship between academic motivation and academic performance. H_{03}: There is no statistically significant relationship between

academic motivation and academic performance of the public secondary schools' students in Nairobi County – was tested using Pearson Moment Product Correlation test.

iv. Examine if there is any relationship between academic self-efficacy and academic performance. $H_{04:}$ There is no statistically significant relationship between academic self-efficacy and academic performance of the public secondary schools' students in Nairobi County – was tested using Pearson Moment Product Correlation test.

4.2 Demographics of the participants

Demographic information of students is presented in this section using percentages and frequencies. Demographic characteristics were used to describe and summarize data in reference to demographic characteristics of the respondents. The data for the study was collected by use of questionnaires and document analysis.

In addition these demographic characteristics were analyzed in relation to the respondents KCSE grades to the main variables of the study which were, career aspiration, school type, academic motivation and academic self-efficacy. In this latter analysis, statistical analysis in terms of mean, standard deviation and or skewness were also used in the description of the demographic data. Academic performance of the students was determined by the KCSE results of 2017 which were collected during the second level of data collection. This was achieved by re-visiting the sampled schools after two months in order to access 2017 KCSE grades for the students who took part in the study. The sensitivity and confidential nature of national examination results in Kenya in general also delayed the accessibility of the results. In some schools this exercise was rather tedious and discouraging due to the unprecedented poor performance in Nairobi County which made the school administration apprehensive to disclose. This made the undertaking highly bureaucratic as it was only the principals and the

deputy of the schools who could release the national examination results records for the schools. Thus, making appointment and honoring them with them out of their busy schedules proved a daunting task to the researcher. Nevertheless, the researcher was able to access the examination results for all the 397 students who participated in the study.

The information with regard to the analyses of the respondents' demographic data is presented in tables and figures. Characteristics of the respondents by gender, residential status and school category is shown in Table 3

Table 3:
Characteristics of the Respondents by Gender, Residential Status and School Category

Variable	Levels	Frequency	Percentage (%)
Gender	Female	182	45.8
	Male	215	54.2
	Sub-total	**397**	**100**
Residential Status	Boarder	217	54.7
	Day Scholar	180	45.3
	Sub-total	**397**	**100**
School Category	National	62	15.6
	Extra- County	126	31.7
	County	49	12.3
	Sub- County	160	40.3
	Sub-total	**397**	**100**

In relation with the result in Table 3 it is notable that both genders, categories of schools, and both boarding and day scholars proportionately provided respondents for the study. This gave a reasonable representation of respondents for this study. Nevertheless, on sex comparison, boys provided more respondents (215, 54.2% compared to girls (182, 45.8%). In relation to residential status, boarders are more (217, 54.7%) than day scholars (180, 45, 3%) which could have been attributed to the resent move where all girls day secondary schools were converted into boarding schools. Boarding schools are perceived to offer quality education and less prone to distractions inherent in urban city like Nairobi. More analysis was done the

school type and the demographic characteristics. Figure 4 presents the results of analysis on the distribution of respondents by their schools' type.

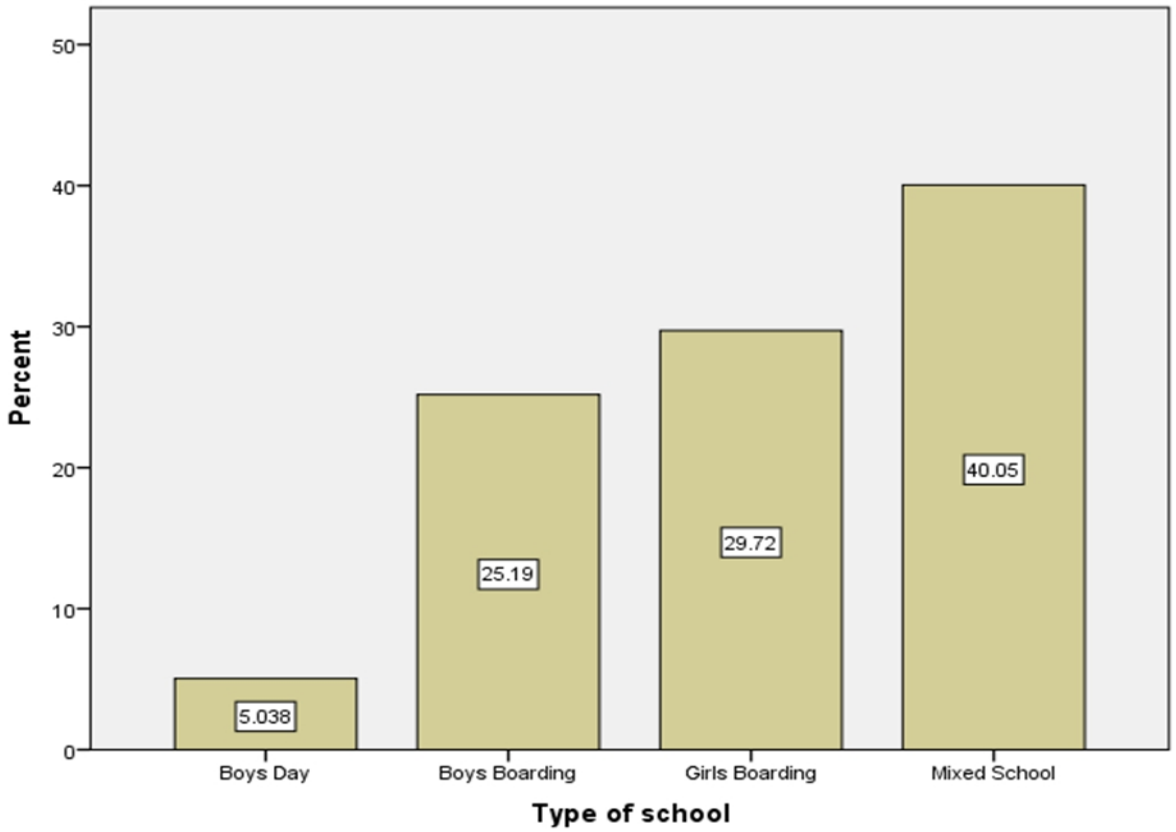


Figure 4: *Distributions of Respondents by their Respective Schools' Types*

Figure 4 show that all types of schools fairly provided respondents for the study in Nairobi County. Mixed boys' schools are the majority with the highest population of 3959 hence they provided 40.5% of sampled schools which is equivalent to 6 schools out of 42 schools. These schools admit all the students who fail to attain entry marks into all the other categories of schools. This was followed by girls' boarding schools with an overall population of 2862 hence contributed 29.72% of the sample which amounted to 3 out of 23 schools. This high population can be attributed to the fact that all the day girls secondary schools had been converted into boarding schools by the time this study was taken. Boarding boys' boarding with a population of 2464 provided 25.19% to the sample drawn from 2 out of 14 schools.

Boys' day schools with the lowest population of 496 contributed 5.04% to the sample who were taken from one school out of five schools.

4.3 Descriptive Statistics for the Participants

Data collected in this study was able to inform the state of key study constructs. Analyzing the data by use of descriptive statistics where frequencies, percentages, mean values, and standard deviations allowed the study to highlight the status of assessed constructs which are presented in tables and discussed in this section. Table 4 highlights a brief summary of the students' mean grades in 2017 KCSE results.

Table 4:
The Summary of 2017 KCSE Mean Grades (academic performance) of the Respondents

Mean Grade	Frequency	Percent
A	1	0.3
A-	3	0.8
B+	20	5.0
B	26	6.5
B-	33	8.3
C+	32	8.1
C	32	8.1
C-	27	6.8
D+	70	17.6
D	82	20.7
D-	69	17.4
E	2	0.5
Total	**397**	**100.0**

Source: KNEC, 2018

Table 4 illustrate that out of 397 students who took part in the study, only 115 (28%) were within the university cut- off mark which is grade C^{+} and above hence a majority of 282 (78%) missed university admission and have to join other institutions of learning or work force. As can be observed, a majority of 152 (38.3%) students had D grades. The overall mean grade

for Nairobi County was 3.65 which translate into grade D which may be considered as a dip in performance compared to C grade over the previous years. Descriptive statistics of respondents' academic performance is presented in Table 5

Table 5:
Descriptive Statistics of Respondents' Academic Performance

	N	Range	Minimum	Maximum	Mean	Sd	Skewness
Points Equivalent to Mean Grade Obtained	397	11.00	1.00	12.00	4.92	2.56	.63
Valid N	397						

Note.min = minimum; max= maximum; sd= standard deviation; sk= skewness
Sd = standard deviation

Table 5 illustrate a positive coefficient of skewness (.63) indicating that majority of the respondents scores were below the mean score (Mean = 4.92). If skewness is less than −1 or greater than +1, the distribution is highly skewed. This is a clear evidence of poor performance in Nairobi County which should concern all the education stakeholders in Kenya since it is a key criterion to judge one's total potentialities and capacities for advanced studies and eventual entry into the world of work. On the other hand secondary schools are the turning point in the life of an individual at which he/she makes career decisions which are determined by academic performance. Respondents' KCSE level of academic performance is displayed in Table 6

Table 6:
Distribution of Respondents KCSE Levels of Academic Performance

	Frequency	Percent
Low (D^+ and below)	224	56.4
Average (B^- - C)	123	31.0
High (A- B^+)	50	12.6
Total	397	100.0

Table 6 presents the respondents' levels of academic performance which were into categorized into levels of high, moderate and low. Any respondent with grade B and above was considered to have a high academic performance. This is because these grades carry more weight in university admission into what is referred as professional and prestigious courses such as law, medicine, engineering, and finance. Only 50 (12.6%) respondents had high academic performance out of the total respondents. Between B^- and C^- grades were considered moderate level of academic performance and encompass those students at the lower and upper edge of university and middle-level college admission respectively. This level registered 123 (31.0%) students. Low level of academic performance consisted of grade D^+ and below. This consists of students who may join polytechnics for artisan courses or work force. This category formed the majority of the total respondents (224, 56.4 %). Indeed, this is a reflection of poor academic performance in Nairobi County, a trend echoed in his study.

In order to establish whether academic performance is related to career aspiration, students' awareness of career option was sought. Students were asked to indicate whether they are aware of career options that are available to them or not. The findings are found in Figure 5.

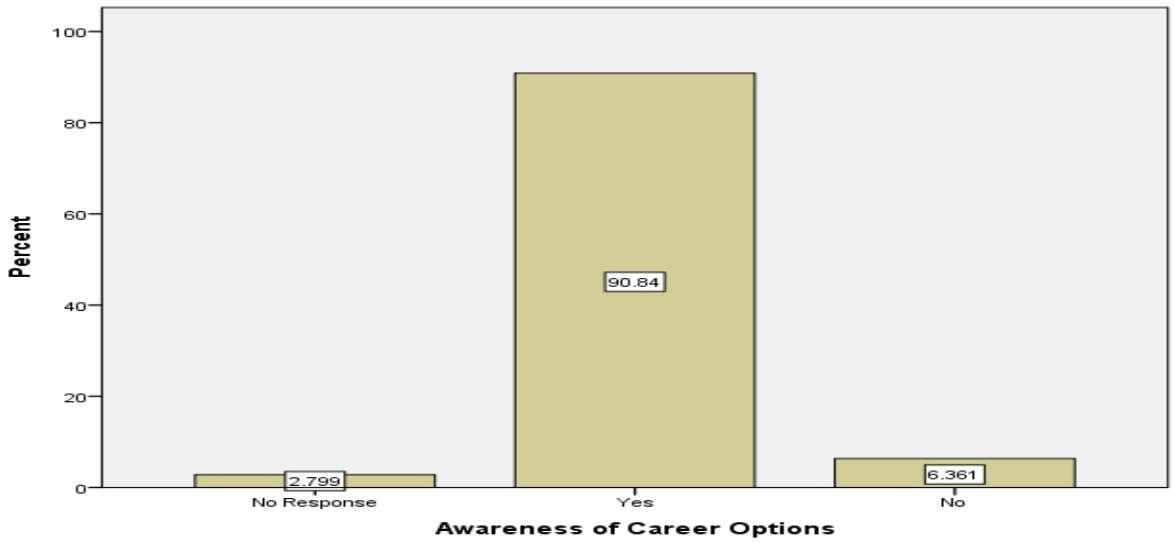


Figure 5: *Distribution of Respondents' Awareness of Career Options*

Findings of the analysis found in Figure 5 demonstrate that majority (360, 90.84%) of the students have the awareness of the various career possibilities for long-term employment. The urban environment might have exposure the students to formal and informal world of work. However, if the schools would equip the students with the necessary career information and their educational qualifications and requirements, they are likely to develop realistic career aspiration. It is also notable that a small percentage (2.8 %, 11) of the students were unresponsive and only 6, 38 % (26) registered lack of awareness of career options.

To find out if there was any relationship between career awareness and residential status of the students, analysis was done and the results are depicted in Table 7

Table 7:
Distribution of Respondents 'Career Awareness versus their Residential Status

Residential status		Awareness of Career Options			Total
		No Response	Yes	Not Sure	
Boarder	Count	9	196	12	217
	% within Residential status	4.1	90.3	5.5	100.0
Day scholar	Count	2	161	13	176
	% within Residential status	1.1	91.5	7.4	100.0
Total	Count	11	357	25	393
	% within Residential status	2.8	90.8	6.4	100.0

Key: *% = Percentage*

It is clear that majority of the students irrespective of their residential status are aware of career options. Table 7 illuminate the fact that day scholars (161, 91.5%) are more aware of career options than their counterparts in boarding schools (196, 90.3). %). More boarders (9, 4.1%) than day scholars (2, 1.1%) were unresponsive. This could have meant that the daily interaction of day scholars with the world outside school enhances their career awareness. However, more day scholars (12, 5.5%) were not sure about career potions compared with boarders (13, 7.4). Relationship between respondents' career awareness and school type is shown in Table 8.

Table 8:
Relationship between Respondents' Career Awareness and School Type

Type of school	Respondent's	Awareness of Career Options			Total
		No	Yes	No Sure	
Girls Boarding	Count	5	111	2	118
	% within Type of school	4.2	94.1	1.7	100.0
Boys Boarding	Count	4	86	10	100
	% within Type of school	4.0	86.0	10.0	100.0
Mixed School	Count	2	140	13	155
	% within Type of school	1.3	90.3	8.4	100.0
Boys Day	Count	0	20	0	20
	% within Type of school	0.0	100.0	0.0	100.0
Total	Count	11	357	25	393
	% within Type of school	2.8	90.8	6.4	100.0

The findings in Figure 8 point out that majority of students irrespective of their types of schools are aware of career option. It is evident that awareness of career options is not majorly determined by the type of school a student attends. Nevertheless, all the respondents in boys' day schools indicated their awareness of career options (100%) followed girls'

boarding schools day schools with (94.1%). Boys' boarding schools had the least respondents who were aware of career option (86.0%). It is also notable that girls boarding schools hah the most students who indicated lack of awareness of career options (5, 4.2%) while boys boarding registered most students who were indecisive in terms of career awareness (10, 10%). More computation was done on the students' career awareness and their school category. The results are shown in Table 9.

Table 9:
Cross Tabulation of Career Awareness and School category.

School Category		Awareness of Career Options			Total
		No Response	Yes	No sure	
National	Count	3	57	2	62
	% within School Category	4.8	91.9	3.2	100.0
Extra-County	Count	3	115	8	126
	% within School Category	2.4	91.3	6.3	100.0
County	Count	3	44	2	49
	% within School Category	6.1	89.8	4.1	100.0
Sub-County	Count	2	141	13	156
	% within School Category	1.3	90.4	8.3	100.0
Total	Count	11	357	25	393
	% within School Category	2.8	90.8	6.4	100.0

Accordingly, Table 9, infer that a majority of students (357, 90.8%) from all categories of schools are aware of the career options indicating that a school category a student attends does not inhibit the students' knowledge of career options. Students in National schools seems to be most aware of career options (57, 91.9%), followed by Extra County schools (115, 91.3%). This indicates a relationship between academic ability and career awareness. However, more students in Sub-County schools were aware of career options (141, 90.4%) than those in County schools (44, 89.8%) though the range was small (0.6%). In general, the

total respondents those were unsure about career options (25, 6.4%) outnumbered those who were unresponsive (11, 2.8%). Various levels of careers aspiration of the secondary schools' students were considered and findings are represented in Figure 6.

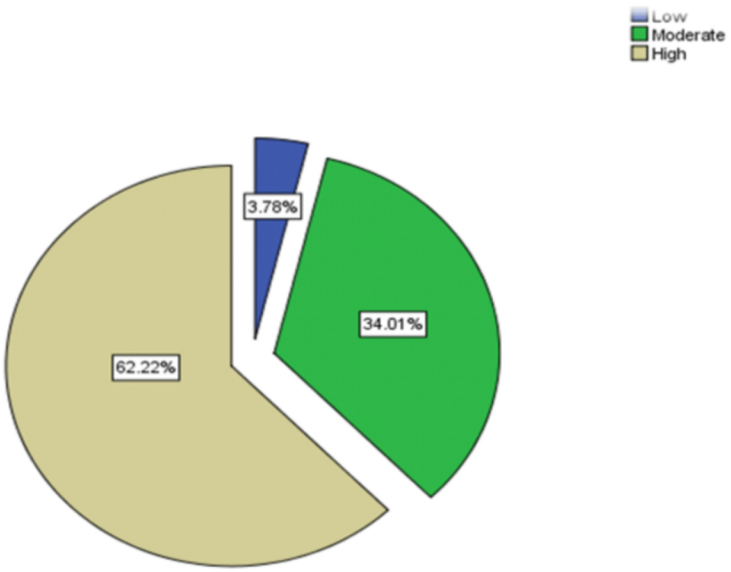


Figure 6: *Distributions of Respondents' Levels of Career Aspirations*

Career aspiration is a reflection of a sense of identity, career ambitions and hope for future. Levels career aspiration were conceptualized as high (13- 15), moderate (9-12) and low (5-6). Figure 5 depict a high career aspiration for majority of the respondents (62.22%) and just over a third (34%) of the total respondents reported moderate levels of career aspiration. This could suggest that students are potentially aspiring to careers but they are not efficacious enough to attain those career goals or they lack knowledge of academic requirements of that career. A minority of 3.8 % registered low career aspiration. Additionally, the level of career aspiration and school type was analyzed and the findings are shown in Table 10

Table 10:

Level of Career Aspirations and Type of School

Type of school		Level of Career Aspirations			
		Low	Moderate	High	Total
Girls Boarding	F	0	36	82	118
	% within Type of school	0.0	30.5	69.5	100.0
Boys Boarding	F	6	34	60	100
	% within Type of school	6.0	34.0	60.0	100.0
Mixed School	F	9	54	96	159
	% within Type of school	5.7	34.0	60.4	100.0
Boys Day	F	0	11	9	20
	% within Type of school	0.0	55.0	45.0	100.0
Total	F	15	135	247	397
	% within Type of school	3.8	34.0	62.2	100.0

Note. f = frequency; *%*= percentage

As reflected on the data, respondents in girls' boarding schools have the highest level of career aspiration (82, 69%) and none in the low level. Girls in boarding schools seem to be more focused on future careers. Consequently, boys' day Schools registered the lowest respondents in the high level of career aspiration (9, 45% but none in the low level. It is notable that respondents in both Boys Boarding and Mixed Schools cut across all the levels of career aspiration with their majority respondents in high level of career aspiration (60,60%) and (96, 60.4%) respectively. Levels of career aspiration were further analyzed against category of schools as shown in Table 11.

Table 11:
Level of Career Aspirations and School Category of the Respondents'

School Category		Level of Career Aspirations			
		Low	Moderate	High	Total
National	F	0	21	41	62
	% within School Category	0.0	33.9	66.1	100.0
Extra- County	F	0	38	88	126
	% within School Category	0.0	30.2	69.8	100.0
County	F	6	22	21	49
	% within School Category	12.2	44.9	42.9	100.0
Sub- County	F	9	54	97	160
	% within School Category	5.6	33.8	60.6	100.0
Total	F	15	135	247	397
	% within School Category	3.8	34.0	62.2	100.0

Key: F= frequency*; %=* Percentage

As shown in Table 11 National and Extra County schools do not have any respondents in the low level of career aspiration. This level is dominated by respondents from County and Sub-County schools. Majority of the respondents in high level of career aspiration come from National and Extra- Schools (66%, 69%) respectively which is indication of a relationship between academic abilities and career aspiration. The county and sub-county schools students cut across all the levels of career aspiration. Sub-County schools which are day schools had 97 (60.6%) students with high level of career aspiration compared with county schools which are mainly boarders with 21 (42%) students. The interactive influence of sub county schools' students with life out- side school could explain the difference. Additionally, the level of career aspiration and residential status was analyzed and the findings are shown in Table 12

Table 12:

Level of Career Aspirations and Residential status of the respondents

Residential Status		Level of Career Aspirations			
		Low	Moderate	High	Total
Boarder	F	6	70	141	217
	% within Residential status	2.8	32.3	65.0	100.0
Day scholar	F	9	65	106	180
	% within Residential status	5.0	36.1	58.9	100.0
Total	F	15	135	247	397
	% within Residential status	3.8	34.0	62.2	100.0

Note: F = Frequency; *%*= percentage

The findings in Table 12 demonstrate a difference in the levels of career aspiration between boarders and day scholars. In the category of high career aspiration the difference is only 6.1% despite the contextual difference of the two groups. As for the moderate and low levels of career aspiration, the range is 4.2% and 2.2% respectively. The slight difference may have been caused by boarders having more time in school for educational and career information enhancing programs. More analysis was done to determine if gender is a factor in career aspiration of the students. The results are displayed in Table 13

Table 13:

Gender Differences in Levels of Career Aspiration of the Respondents

Gender		Level of Career Aspirations			Total
		Low	Moderate	High	
Girl	F	2	56	124	182
	% within Gender	1.1	30.8	68.1	100.0
Boy	F	13	79	123	215
	% within Gender	6.0	36.7	57.2	100.0
Total	F	15	135	247	397
	% within Gender	3.8	34.0	62.2	100.0

Note: f = Frequency; % = Percentage

Table 13 illustrates that more girls (124, 68.1%) than boys (123, 57.2%) are in the high level of career aspirations. Conversely, more boys (13, 6%) than girls (2, 1.1%) have low career aspirations. From this evidence-based research, it is revealed that girls have higher career aspirations and therefore likely to have better academic performance than boys..

More tabulation was done on levels of career aspiration and academic performance of the students. It was hypothesized that the highest academic achieving students would have high career aspiration and the lowest achieving students would have low career aspiration. To determine this, analysis was done and the findings presented in Table 14

Table 14:

Levels of Career Aspiration and Academic Performance

Level of Academic Performance		Level of Career Aspirations			Total
		Low	Moderate	High	
Low	F	14	82	128	224
	% within Level of Academic Achievement	6.2	36.6	57.1	100.0
Average	F	1	36	86	123
	% within Level of Academic Achievement	0.8	29.3	69.9	100.0
High	F	0	17	33	50
	% within Level of Academic Achievement	0.0	34.0	66.0	100.0
Total	F	15	135	247	397
	% within Level of Academic Achievement	3.8	34.0	62.2	100.0

Note. *f* = frequency; *%*= percentage

The findings presented in Table 14 confirm that the level of academic performance correlates with levels of career aspiration. For example a number respondent with low level of academic performance reported low career aspiration (14, 6.2%). The students with moderate and high levels of academic performance correspond with the same levels of career aspiration.

For example, in moderate level of academic performance, only one (0.8 %) respondents reported low level of career aspiration while 36 (29.3%), students reported both moderate academic performance and career aspiration. Respondents in high levels of both academic performance and career aspiration were equally high 86 (69.9%).

Surprisingly, respondents with low academic performance spread across all the levels of career aspiration with 128 (57.1%) in the category of high career aspiration and 86 (36.6%) in moderate level. This indicates that high career aspirations may not always translate into academic success to some students signifying a presence of some mediating variables. High career aspirations are therefore a prerequisite to academic performance and vice vasa. Levels of career aspiration and academic performance mean was calculated and findings are revealed in Table 15

Table 15:

Level of Career Aspirations and Academic Performance Mean

Level of Career Aspirations	Number of Respondents	Percentage (%)	Academic Performance mean (points)
Low	15	3.8	2.73
Moderate	135	34	4.70
High	247	62.2	5.17

Table 15 present an association between the levels of career aspiration and academic performance mean of the students. It is also evident that a high majority of 247 students were in the category of high level of career aspiration with academic performance mean of 5.17. On the other hand, 135 students fell in moderate level of career aspiration with academic performance mean of 4.7 and only 15 students were in the low level with a mean of 2.73. High career aspiration therefore is a predictor and prerequisite for high academic performance mean of the secondary school students. The researcher further analyzed the participants' academic performance mean score across school types and the results of this analysis are offered in Table 16

Table 16:

Distribution of Academic Performance Mean Score across Type of Schools

School Type	N	Mean Score	Description of Level of Academic Performance
Mixed School	159	3.42	Low
Boys Boarding	100	3.88	Low
Boys day	20	4.35	Moderate
Girls Boarding	118	7.91	High

From the analysis exhibited in Table 16 it is notable that the highest mean score in academic performance was recorded in girls' boarding schools (7.91). This suggest that girls boarding schools empower the girls to achieve more in the scope of their career ambitions compared to their peers in other types of schools. Boys' day schools registered moderate academic performance (4.35) while the lowest mean was recorded by mixed schools (3.42). The implication of this finding is that the type of school a student attends determines his or her academic performance.

Analysis was done on school type and the levels of academic performance. Table 17 demonstrates these results.

Table 17:

Levels of Academic Performance and Type of school

Type of school		Frequency %	Level of Academic Performance			Total
			Low	Average	High	
	Boys Day	F	11	8	1	20
		%	4.9	6.5	2.0	5.0
	Mixed School	F	139	18	2	159
		%	62.1	14.6	4.0	40.1
	Boys Boarding	F	69	28	3	100
		%	30.8	22.8	6.0	25.2
	Girls Boarding	F	5	69	44	118
		%	2.2	56.1	88.0	29.7
Total		F	224	123	50	397
		%	100.0	100.0	100.0	100.0

Note. f = frequency; %= percentage minimum

From the analysis displayed in Table 17, majority of the students (224) fell in low level of academic performance indicating an overall poor performance. A high majority of the students in low level of academic performance came from mixed schools (139, 62.1%) followed by Boys' Boarding schools had (69, 30.8%). Only a few respondents from Girls Boarding school fell in this low level of academic performance (5, 2.2%). Conversely, majority of the Girls in Boarding schools registered an average level of academic performance (69, 56.1%) and also dominated in the high level of academic performance (44, 88%). Other types of schools rated very low in the high level of academic performance with Boys Boarding lagging behind all the others (1, 2%). Descriptive statistic was done on the respondents' academic motivation and this analysis is presented in Table 18

Table 18:

Descriptive Statistics of the Respondents' Academic Motivation

	N	Min	Max	Mean	Sd	Sk	Sd. Err
Academic Motivation Score	320	-7.13	15.00	7.3591	4.28287	-.788	.136
Valid N (listwise)	320						

Note.min = minimum; max = maximum; Sd= standard deviation; Sd Err = standard error; Sk= skewness.

Negative skewness (Sk= -0.79) shows that majority of the respondents had high academic motivation score. As shown in Table 18, the minimum academic motivation score was - 7.13 while the maximum score was 15.00. The anticipated minimum and maximum scores were -18 and 18 respectively. The mean score was 7.36 and the standard deviation was 4.28. The coefficient of skewness was found to be -7.88 meaning that many participants rated

themselves highly on this scale. Standard error was of 0.136 and being relatively small gives an indication that our mean is relatively close to the true mean of our overall population. The respondents' academic motivation score was categorized further into the low, average and high level of academic motivation as follows: -18 to -7, -6 to 6 and 7 – 18 respectively. The results are displayed in Table 19

Table 19:

The Respondents' Levels of Academic Motivation

Levels of academic motivation	Frequency	Percent (%)
Low	224	56.4
Average	123	31.0
High	50	12.6
Total	397	100.0

Table 19 indicates that a majority or more than half of the total respondents (224, 56%) had low levels of academic motivation. This was followed by 123(31%) students with average levels of the same. Only a small number of the respondents (50, 12.6%) achieved high level of academic motivation. This could explain the poor academic performance of students in Nairobi County despite its urban outlook and the advantages accrued to it in terms of having adequately equipped schools with facilities and resources, availability of the information from various sources like mass media, print and electronic media, elite families and peers groups who can offer both intrinsic and extrinsic academic motivations. Academic motivation means score and school demographics analysis is presented in Table 20.

Table 20:

Academic Motivation Mean Score and School Demographics

Type of School	**Number of Respondents**	**Academic Motivation Mean Score**
Girls Boarding	99	8.88
Boys Day	19	7.57
Mixed School	134	7.16
Boys Boarding	68	5.49
School Category	**Number of Respondents**	**Academic Motivation Mean Score**
National	50	10.58
Extra County	103	6.47
County	32	5.92
Sub- County	135	7.18
Residential status	**Number of Respondents**	**Academic Motivation Mean Score**
Border	166	7.48
Day scholar	154	7.23

Respondents from Girls Boarding schools had the highest academic motivation mean score (n=99, M=8.88) implying that boarding schools offer a climate that is academically motivational. Conversely, Boys' Boarding Schools registered the lowest academic motivation mean of 5.49 meaning that boarding schools in this case could be an impediment to academic motivation for the boy child. It is likely that boys academic motivation is extrinsically oriented hence they need constant contact with significant others in order to draw support, encouragement vicarious learning as opposed to girls.

National schools which admit students with the highest academic abilities registered the highest academic motivation mean of 10.58. This is in conformance with previous studies that outlined that academically successful students have a significantly higher motivation for achievement than unsuccessful students. Sub-county schools which admit students with the lowest academic abilities had a higher academic mean (7.18) as compared with county (5.92) and Extra County schools (6.47). This could mean that students have been motivated but lack of academic abilities to achieve academically.

Students in Extra-County and County schools registered academic motivation mean score of 6.47 (103) and 5.92 (32) despite the fact they admit with higher academic abilities than Sub-County Schools. This makes is extremely important for further research to be done on how schools can use their educational environments to facilitate academic motivation in their students since motivation in students often yield greater student engagement and better academic results.

In terms of the students' residential status, boarding school showed a higher academic motivation mean of 7.48 (166) than day scholars with 7.23 (154). There was also negligible difference in academic mean score in boys' day (7.57) and mixed schools (7.16) showing some common characteristics in these schools which are both non-boarders. This indicates that residential status of students has impact on academic motivation. This could also imply that intrinsic motivation is more likely to influence academic motivation than extrinsic or contextual factors since boarders have less contact with significant others and media who are likely to offer extrinsic motivation. Boarders seem to rely more on intrinsic motivation for their academic performance. According to Bandura (1977), when a person is intrinsically motivated or possesses self-efficacy skills, he or she believes in his or her ability to organize and execute a plan of action that may be required to solve a problem.

Further analysis was done to determine the best predictor of academic achievement given the seven domains/ sub-scales of academic motivation. The findings are summarized in Table 21.

Table 21:

Description of Academic Motivation Domains

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.123	.930		4.432	.000
	IMk Mean	-.054	.144	-.028	-.374	.709
	IMa Mean	.089	.184	.042	.486	.628
	IMs Mean	-.082	.123	-.046	-.665	.507
	EMid Mean	-.027	.167	-.013	-.163	.870
	EMij Mean	.969	.248	.353	3.911	.000
	EMir Mean	-.343	.132	-.190	-2.607	.010
	Amo Mean	-.524	.136	-.247	-3.843	.000

a. Dependent Variable: Academic performance

Note. Resultant equation

AcP = 4.12 + 0.35EMItr -0.19 EME – 0.25AMT Adj=0.09, P< 0.05

Key: IMk=Intrinsic Motivation to know; IMa=Intrinsic Motivation orientation towards achievement; IMs=Intrinsic motivation towards stimulating experiences; EMid = Extrinsic Motivation identified regulation; Emir= Extrinsic Motivation introjected regulation; EMer= Extrinsic Motivation external regulation; Amo; Amotivation; M= mean; SD= standard deviation

The results obtained in Table 21 argument the extent to which each domains of academic motivation made a contribution to the prediction of academic performance. In terms of the magnitude of contribution, the best and significant predictor of academic performance is extrinsic motivation- introjected regulation domain (Beta = 0.353, t = 3.911) whose internalization is not truly self-determined and it is limited to external contingencies. A study by Mutweleli (2015) showed that extrinsic motivation towards introjected regulation had a negative beta weight (β = - 0.22, $p < 0.05$) which indicated a negative relationship with academic achievement.

Intrinsic motivation towards accomplishment was found to have a positive predictive value towards academic performance though not significant (Beta= 042, *t* = .486). Intrinsic motivation to know depict a relationship with academic performance though negative (Beta = -.028*, t*= -.378). This is despite the fact that, intrinsic motivation represents the most self-determined type of motivation in which activities are accomplished for the sake of enjoyment driving the students into achieving the highest standards in academics. Intrinsic motivation to experience stimulation has the least relationship with academic motivation in the intrinsic domain (*B = -.046, t = -.665).* This is irrespective of the fact that some researchers have affirmed it as the best predictor of the intentions to stay active academically (Vallerand & Bissonnette, 1992).

Extrinsic integrated regulation (Emir) reported a negative relationship with academic performance (Beta = - .190, t = -2.607). This is the most autonomous kind of extrinsic motivation and closest to intrinsic motivation yet it has significant negative relationship with the academic motivation. Extrinsic motivation identified is the best negative predictor of academic achievement among of extrinsic motivation domains (B = -.027*, t* = -.163). Identified regulation arises when a behavior is appreciated, valued and judged important for the individual, and especially perceived as chosen by one.

Amotivation score was found to have a negative and significant beta weight *(-0.240, t = -3.843).* Amotivation has been likened to learned helplessness, boredom, nonattendance, and low involvement and poor concentration in class (Vallerand & Bissonnette, 1992). Amotivated students therefore would automatically be expected to perform poorly in school. Conversely, the academically poor students are likely to be amotivated. Deci and Ryan (2000) who found that amotivation were most significantly related to GPA, for boys and girls across

all levels of schooling and cross-cultural set-ups. More computation was done to find out if gender relates to academic motivation and findings are presented in Table 22.

Table 22:

Responses of Students' Gender versus Academic Motivation

	Gender	N	Mean	Sd
Academic Motivation Score	Female	152	8.2815	4.00261
	Male	168	6.5246	4.36777

Note. Sd= standard deviation

The findings in Table 22 illustrate that girls have a significant higher mean in academic motivated than boys *(M = 8.28, SD = 4.00) and (M = 6.52, SD = 8.01)* respectively. Girls are therefore more likely to achieve better academic performance than boys. More computation was done to find out gender orientations in terms of the domains of the academic motivation and findings are presented in Table 23

Table 23:

Academic Motivation Domains versus Gender

12	Sex	N	Mean	Sd
IMk	Girl	176	21.4943	5.28069
	Boy	208	20.9519	5.46465
IMa	Girl	178	21.2022	4.97946
	Boy	207	20.1643	4.95730
IMes	Girl	171	19.7661	5.73362
	Boy	196	19.2857	5.58018
Emid	Girl	177	23.7175	4.40420
	Boy	209	23.2010	4.91835
EMer	Girl	175	19.8800	5.95215
	Boy	198	20.8889	5.23050
EMij	Girl	181	16.8453	3.49735
	Boy	208	16.7500	3.89909
Amotivation Score	Girl	182	7.3681	4.22982
	Boy	211	9.2559	5.33460

Note. Sd= standard deviation; IMk=Intrinsic Motivation to know; IMa=Intrinsic Motivation orientation towards achievement; IMse=Intrinsic motivation towards stimulating experiences; EMid= Extrinsic Motivation identified regulation; EMij= Extrinsic Motivation introjected regulation; EMer= Extrinsic Motivation external regulation; A= Amotivation; M= mean

From Table 23, girls are portrayed as being more motivated than boys in all the domains except in Amotivation which is the least autonomous and negative in the self-determination continuum. Girls had a mean score of 7.4 and boys 9.3. Amotivation negatively relate with academic performance. Sex difference in all the domains is highest in Amotivation which the lowest domain and in favor of boys (1.89). Sex differences in motivation could be rooted in the overwhelming social emphasis on feminism which has led to the over empowerment of the girl child in Kenya. Girls seem to have a balance of motivation between intrinsic and extrinsic motivation. For motivation to be most operational there must be a balance of both extrinsic and intrinsic motivation. Descriptive analysis was done on academic self-efficacy of the students and the findings are shown in Table 24.

Table 24:

Descriptive analysis of Academic Self-efficacy Scores of the Respondents

	N	Min	Max	Mean	SD	Skew-SE	
Academic Self-efficacy Score	369	8.00	56.00	44.2900	7.72313	-1.158	.127
Valid N	369						

Key: Min- minimum; Max-maximum; Sd- Standard Deviation Statistics; SE- Standard Error

The average score for the 8 items of the self-efficacy scale was 44.29 and SD of 7.72. The minimum and maximum range of the scale of self-efficacy is also indicated (Min = 8; Max = 56) for 369 respondents. Coefficient of skewness is negative (sk= - 1.158) which mean that majority of the respondents had high scores on the self-efficacy scale. High scores in self-efficacy are hypothetically associated with good academic performance. Standard error is also small (.127) showing less deviation of the sample mean from the actual population mean. Descriptive statistics for self-efficacy scores across school type was analyzed in Table 25

Table 25:

Descriptive Statistics for Academic Self-Efficacy scores across School Type

Type of School	N Statistic	Min	Max	Mean	Sd	Skew	SE
Girls Boarding	111	14.00	56.00	44.0180	6.95960	-1.013	.229
Boys Boarding	89	8.00	56.00	44.5618	8.18807	-1.586	.255
Mixed School	150	14.00	56.00	44.0600	8.17939	-1.007	.198
Boys Day	19	36.00	56.00	46.4211	5.98439	-.098	.524

Note. Min = Minimum; max = Maximum; Sd = standard deviation; Sk = skewnes SE = Standard error

Figure 25 appear that all schools registered maximum academic self-efficacy scores of 56 indicating that high self-efficacy is a common phenomenon irrespective of school types. This might mean that all schools expose their students to some sources of academic self-efficacy.

It is notable that boys day schools had the highest mean of academic self- efficacy scores (M= 46.42, SD= 6.9) with a minimum of 36 and a maximum of 56 scores. Day schools in Kenya are associated with low academic ability students as well as inadequate facilities and resources, which mediates academic performance.

High academic self-efficacy in boys day schools could be a product of the students' daily interaction with agents of self-efficacy such as media, role models and significant others. This interactions offers encouragement and vicarious learning that boost their determination to succeed academically despite their daily challenges in commuting from school to home and juggling school work and home responsibilities which may take time away from their studies.

Boys' boarding schools had the lowest academic self-efficacy mean of 44.01 (*SD= 8.2*). This can be attributed to a limited interaction with sources of self-efficacy that are found outside school settings. There was minor difference in academic self-efficacy mean score in

Girls boarding schools (*M = 44.01, Sd = 6.96)* and mixed schools (*M = 44.06, Sd = 8.17*)

Descriptive analysis of Self- efficacy scores and respondents residential status is presented in Table 26

Table 26:

The Descriptive Analysis of Academic Self- efficacy scores across Residential Status

Residential status	N	Min	Max	Mean	Sd	Sk	SE
Boarder	199	8.00	56.00	44.2462	7.53273	-1.311	.172
Day scholar	170 170	14.00	56.00	44.3412	7.96227	-1.015	.186

Note. Min = Minimum; Max= Maximum; Sd= Standard deviation; Sk= skewness

Analysis in Table 26 pointed to the fact that students in boarding schools exhibited a lower minimum scores (*Min = 8)* in academic self-efficacy and a lower mean *(M = 44.25, Sd = 7.53).* Day scholars on the other hand registered a higher minimum scores *(Min = 14) Sd =7.9)* and mean *(*M = 44.34, Sd =7.96). This implies that day scholars who interact with multiple sources of self-efficacy both in and outside schools simultaneously foster a higher academic self-efficacy. Boarding schools therefore may impede the development of self-efficacy beliefs among the students due to limited exposure to agents of self-efficacy. Nevertheless, both boarders and day scholars had a maximum score of 56 indicating that self-efficacy cut across all students irrespective of their residential status. More analysis was done on the levels of academic self-efficacy and gender of the respondents and the findings are shown in Table 27

Table 27:

Descriptive Statistics for Academic Self-efficacy versus Gender

	Gender	N	Mean	Sd
Academic Self-efficacy Score	Female	173	43.9480	7.38656
	Male	196	44.5918	8.01516

Note. Sd = standard deviation

Table 27 indicate a difference of academic self-efficacy for males *(M = 44.59, Sd = 8.02)* than their counterparts females (*M = 43.95, Sd = 7.39).* However, the difference (0.64) which is in favor of males is negligible. A higher standard deviation for male (8.10) mean that the academic self-efficacy is more spread out over a wider range of values and a lower standard deviation for females (7.39) indicates that the their academic self-efficacy data points tend to be close to the mean.

Additional analysis was done on the students' levels of Academic Self-efficacy in Table 28.

Table 28:

Level of Academic Self-efficacy of Secondary School Students

Category of self-efficacy		Frequency	Percent (%)	Valid Percent
Valid	Low	30	7.6	8.1
	High	339	85.4	91.9
	Total	369	92.9	100.0
	No Response	28	7.1	
Total		397	100.0	100.0

Evaluation in Table 28 demonstrates that majority of the students (339, 85%) have high levels of academic self-efficacy. Only a few students (30, 7.6%) registered low levels of academic performance. A total of 28 (7.1%) did not respond to the questionnaire may be due to lack of comprehension of the concept of academic self-efficacy. It is hypothesized that self-efficacy is a precursor for academic performance. Given the high levels of self-efficacy for the majority of the students in Nairobi County, better academic performance is anticipated However, Nairobi County continues to register poor KCSE national examination. This could mean that the students have strong beliefs about their academic capabilities and competence but lacking in strategies for translating this beliefs into academic success. It is also possible that some students are over efficacious hence fail to put effort in their academic undertakings.

Students therefore need understanding of the development of an individual's self-efficacy beliefs and positive applications of the four sources of self-efficacy information.

A level of academic self-efficacy across school type was analyzed and finding revealed in Table 29

Table 29:

Level of Academic self-Efficacy and Type of school

Type of school		Category of self-Efficacy Low	High	Total
Girls Boarding	Count	6	105	111
	% within Type of school	5.4	94.6	100.0
Boys Boarding	Count	9	80	89
	% within Type of school	10.1	89.9	100.0
Mixed School	Count	15	135	150
	% within Type of school	10.0	90.0	100.0
Boys Day	Count	0	19	19
	% within Type of school	0.0	100.0	100.0
Total	Count	30	339	369
	% within Type of school	8.1	91.9	100.0

Note.% = percentage

The results posted in Table 29 reveal that a high majority of the respondents had high academic self-efficacy (339, 91.1%) irrespective of their school type. A school type that one attends does not inhibit academic self-efficacy. However, academic self-efficacy was highest among the all the respondents in boys' day schools (19, 100%). This could be associated with their daily exposure to various sources of self-efficacy and especially with their significant others who are a major source of encouragement. Girls boarding schools were ranked second (105, 94.5%), mixed schools were third (135, 90%) while boys boarding

schools followed closely (80, 89%). It is clear that boys need autonomous environment to explore and enhance their self- beliefs unlike girls in boarding schools that are able to generate their own experiences that enhances their self-efficacy. Boys' boarding schools should devise intervention programs that enhance boys' self-efficacy. Researcher further analyzed scores on residential status and level of academic self- efficacy. The findings are given in Table 30

Table 30:

Level of Academic Self-Efficacy and Residential Status of Respondents

Residential status		Category of self-Efficacy		Total
		Low	High	
Boarder	Count	15	184	199
	% within Residential status	7.5	92.5	100.0
Day scholar	Count	15	155	170
	% within Residential status	8.8	91.2	100.0
Total	Count	30	339	369
	% within Residential status	8.1	91.9	100.0

Note.% = percentage

These results point out that that all students have high levels of academic self-efficacy irrespective of their residential status (339, 91.9%). Residential status of the students do not meaningfully affects the levels of academic self-efficacy. However, boarders have slightly higher levels of self-efficacy (184, 92.5%) compared to day scholars (155, 91.2%). This could explain more determination and focus among the boarders due to less detraction from their studies. Both boarders and day scholars had equal number of respondents in the lower level of academic self-efficacy (15, 7.5%). Further analysis was done on academic performance and academic self-efficacy and the results are displayed in Table 31

Table 31:

Level of Academic Self-Efficacy and Level of Academic Performance

Level of Academic Performance		Levels of academic self-Efficacy		Total
		Low	High	
Low	Count	22	186	208
	% within Level of Academic Achievement	10.6	89.4	100.0
Average	Count	6	109	115
	% within Level of Academic Achievement	5.2	94.8	100.0
High	Count	2	44	46
	% within Level of Academic Achievement	4.3	95.7	100.0
Total	Count	30	339	369
	% within Level of Academic Achievement	8.1	91.9	100.0

Note. % = percentage

Majority of respondents in high level of academic performance corresponded with high level of academic self-efficacy (44, 95.7%) and only a few reported low level of academic self-efficacy (2, 4.3%). This is consistent with hypothesized idea that academic self-efficacy predict academic performance and vice-vasa. Surprisingly, majority of the students with low academic performance registered high level academic self-efficacy (186, 89.4%) and only a few registered low level of academic self-efficacy (22, 10.6%). This indicates that high academic self-efficacy translate into academic success of some students but not others. Other mediating factors should be addressed in further studies. To determine the relationship between levels of academic self-efficacy and mean of the academic performance, analysis was done and result is shown in Table 32.

Table 32:

Level of Academic Self-efficacy versus the Mean of Academic performance

Level of academic self-efficacy	N	Mean of academic performance(points)	Sd	SE Mean
Low	30	3.7333	2.44855	.44704
High	339	5.0472	2.53335	.13759

Note. Sd= standard deviation; SE= Standard Error

The findings in Table 32 posit a relationship between the levels of academic self-efficacy and mean of academic performance of the students. Towards this end, majority of the students with high level of academic self-efficacy had an average of grade C^- (*M = 5.05, Sd = 2.53)* in KCSE National examination in 2017. Those respondents with low levels of academic self-efficacy had an average of D grade *(M = 3.7, Sd = 2.44).* This designates a relationship between levels of academic self-efficacy and the mean of academic performance among the students in Nairobi County.

4.4 Career Aspirations and Students' Academic Performance in KCSE Exam.

In the first objective, the present study sought to analyze the degree of relationship between career aspiration and students' academic performance in the KCSE national examinations in Nairobi County. Career aspiration was operationalized by analyzing the participants' scores in the 5 items in the questionnaire represented by questions 8 to 12. Respondents were required to answer '*Yes', 'Not Sure' and' No'* to questions like "*I will seek a university degree after Form 4 examinations*' with scores ranging from 3 to 1 for positive questions and vice vasa. Maximum career aspiration scores was 15 and lowest 3. The participants with average scores of 13 to15 were considered as having high career aspiration, those with 9 to12 as having moderate, and 5 to 8 as having low level of career aspiration.

In order to determine the relationship between career aspiration and academic performance, the following null hypothesis was advanced: H_{01}: There is no significant relationship between levels career aspiration and academic performance of the secondary schools students. To test this hypothesis of the relationship between career aspiration and academic performance, the data was subjected to chi-square test analysis as shown on Table 33

Table 33:

Chi-Squire Test for the Relationship between Career Aspiration and Academic Performance of the Respondents

Chi-Square Tests	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	11.846[a]	4	.019
Likelihood Ratio	14.500	4	.006
Linear-by-Linear Association	6.776	1	.009
N of Valid Cases	397		

a. 2 cells (22.2%) have expected *df* less than 5. The minimum expected *f* is 1.89.
Note. df = degree of freedom

The yield in Table 33 provides a statistical hypothesis test for the hypothesis that career aspiration and academic performance are independent of each other. The results of chi-square test for the relationship between students' career aspiration and academic performance at α=.05 revealed the presence of a significant relationship between career aspirations and the secondary school students' academic performance (X^2 = 11.85, df = 4, P = 0.019, P<0.05). The null hypothesis was therefore rejected.

These findings implied that career aspiration can predict academic performance of students in Nairobi County. The higher the students level of career aspiration, the better the KCSE performance, and the lower the level of career aspiration, the poorer the KCSE national exam performance. This may account for the reasons as to why national schools with high academic ability students registered the highest percentage in the high level of career

aspiration (66.1%) and none in the low level *(See Table 4.9).* Ironically, county schools which traditionally perceived to perform better than sub-county schools registered the least percentage in the high level of career aspiration among the entire category of schools (42.9%). This could mean that there are other factors mediating between career aspiration and academic performance of the students in public secondary schools in Nairobi County.

This finding is consistent with a longitudinal study by Nabil (2015) and those of Galyon *et al.,* (2012). Nabil (2015) examined how different combinations of aspirations, expectations and school achievement can influence students' future educational behavior. He used a similar sample as used in this study (form fours students) of students who are between 17-19 years and who had applied to join university in London. The study discovered that students with high aspirations had higher school achievement than those with low aspirations. However his findings also point out that having high aspirations without being able to attain them would negatively influence students by triggering disappointment, frustration and arguable social withdrawal, or at least would result in a 'lost talent'.

The 60.6% sub-county schools' students who reported high career aspiration need to be aligned with the reality of the world of work as they seem to have no reference to academic abilities. This could also mean that there are other extraneous variable mediating the relationship between career aspiration and academic performance which deserves investigation. Overall it could be said that investing in raising aspirations and expectations of students might only work in some cases and among some students. However, career planning is particularly important for low academic achievers and those at risk of a poor transition from school to higher institutions of learning (Nyugen & Bromerg, 2014).

A longitudinal research study of Australian youths on students' career aspirations conducted by Nyugen and Blomberg (2014) evidently indicate that the better the career aspirations formed at school level, the better the possibilities of achieving the same through academic performance. Cheng (2012) study which explored adolescents' educational and career aspirations in Hong Kong high schools in two separate studies also revealed a reciprocal relationship between career aspiration and academic performance. Students should be provided with opportunities for experiencing academic success so that their career potentialities can be cultivated or else remain untapped

Hafsyan (2015) study using a sample from the university found that aspirations were greater for upper division honors students compared to lower division honors students and higher academic involvement was related to higher aspirations. Thus, irrespective of education levels and different study locations, career aspiration was found to be positively correlated to academic performance. Further, an array of studies by Rebecca *et al.,* 2014; Hafsyan *et al., (*2015) and Igere, (2017) have also reported that career aspiration is associated with academic performance. Career aspiration therefore needs to be enhanced among the students as one of the strategy of improving academic performance in all levels of schooling.

A study by Feliciano *et al.,* (2014) on Portuguese students concluded that career exploration is prerequisite to career aspiration and a facilitation condition for better academic performance. A study by Mettol and Kisilu (2016) supported the concept that if students are allowed to explore the world of careers and develop their own interests in the same, they are likely to channel all their academic strategies towards the same hence better academic performance is achieved. Education stakeholders should invest in career exploration programs like job shadowing, internships or apprenticeships, mentoring, school-sponsored enterprises, career education which inspires career aspiration. This implies that career

aspiration must be intentional, not just incidental in order to enhance academic performance. However, implementing such activities causes much debate among teachers. Some may argue that encouraging academic such career exploration programs will ‘waste time’ or ‘dilute learning’. A policy statement encouraging the same may bring the desired outcome.

However, an earlier study by Almon, and Matisidisco (2012) contrasted the findings of the current study. Using a purposive sample of 133 first and second year university students from South Africa found that a relationship between career aspiration and academic performance was not significant. Lack of randomization of sample and context into which the study was taken could have caused this difference. It was possible that students have varied career aspiration but the criteria they have regarding achievement of their career goals are not clear. Students are less likely to translate their career aspiration into goals, and their goals into actions, when they perceive their efforts to be impeded by insurmountable barriers or inadequate support systems. For this reason educators have a profound responsibility in ensuring that secondary school students aspire to study subjects that increase their chances of academic success. Specific student groups may be limited by subject selection underpinned by low aspirations. Such need career information and exposure to be encouraged in their pursuits.

All in all career counseling should be inherently practiced to provide the students with indispensable information and competence required in the world of work. In Kenyan students hardly receive sufficient career guidance on career choices at the right time such that some of the students who qualify to join universities and selected by Kenya Universities and Colleges Central Placement Service (KUCCPS) are given a second chance to revise the selection of courses they would like to pursue at the universities. This shows lack of efficacy in career

decision making. Quality career decisions will benefit the economy by having quality, qualified and productive personnel.

In conclusion, the government is needed to play a more direct role in reshaping the nature of the career guidance workforce and its qualification and training arrangements. For example there should be significant improvements to the level of training required of career guidance practitioners, and with more deliberate interventions to shape the content and nature of career guidance training.

4.5 School Type and Academic Performance in KCSE Exam

The participants' school type was the independent variable. The study sought to establish if there is any relationship between type of school students' attend and their academic performance. School type was measured at a nominal scale of four school classifications that is; boys boarding (coded 4), girls' boarding (coded 3), boys day school (coded 2) mixed schools (coded 1). Students selected their school type from a list of the four options found in appendix B, Part 1 of the questionnaire, item 4. However, the researcher mainly also relied on the school type information already officially documented for each school.

In line with the second objective in the study, which sought to determine if there was any relationship between school type and students' academic performance, the following null hypothesis was formulated. H_{02}: There is no significant relationship between school type and students' academic performance. To test this hypothesis, Chi-square (x^2) was used to test the null hypothesis and results are indicated in Table 34.

Table 34:

School Types and Academic Performance Chi -Squire Test

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	217.862[a]	6	.000
Likelihood Ratio	248.718	6	.000
Linear-by-Linear Association	121.456	1	.000
N of Valid Cases	397		

Note. Df = degree of difference

Table 34 indicate a significant relationship (X^2=217.86, *df* =6, $P < 0.05$) between school type and academic performance of the students. These results specify that there is a statistically significant relationship between school type and students' academic performance $x^2(6) = 217.862$, $p = 0.00$. Hence, the null hypothesis was rejected.

In this study therefore, a majority of the respondents in Mixed Schools and who are traditionally rated poorly in performance had low levels of academic performance while majority of respondents in Girls Boarding schools had high level of academic performance *(See Table, 4.15).* Similar findings have been reported in past research on possible predictors of academic performance which was attributed to differences in school type. In support of these findings are Lia, Martin and Yeung (2017) who demonstrated that school type affect the levels of academic resilience and the consequent academic achievement. These results agree with findings by Kithela (2016) on relationship between school type and students' academic achievement in Kenya. According to the study by Mwangi (2018) differences in school type effects students' academic resilience which impact on academic performance.

Further findings are studies by Busari (2016) who also found a significant difference in academic performance and the difference were in favor of single sex schools while mixed schools reported under performance. Girls' schools in particular, according to Eisenkopt *et al.,* (2012) empowers them by allowing them the freedom to explore their strength and interest,

develop self-confidence and breaks down gender stereotypes, while mixed schools risk reaffirming and reinforcing the same hence affecting the academic performance. As a result, girls in single sex schools develop a better STEM self-concept of ability than mixed classes (Busari, 2012). Moreover, boys' sexist attitudes and behaviors decrease girls' interest in traditionally masculine STEM fields in mixed schools. The tandems with these results are findings of Mukolwe (2015) where girls' boarding schools recorded the highest academic resilient mean score.

In Spielhagen's (2011), study students in single sex schools are more focused and teachers are able to meet their specific needs leading to better academic performance. Classrooms without males are more supportive of girls' academic achievement in countering stereotypical domain. This view is consistent with social psychologists' emphasis on the crucial importance of social context and social interaction in influencing students' behavior (Bandura 1986). For instance, self-efficacy is influenced by a person's specific capabilities and other individual factors, as well as by environmental factors (barriers and facilitators). The school type therefore influences self-beliefs about academic capabilities.

Spielhagen (2011) also revealed that working in consonance with gender differences can significantly boost academic performance for both boys and girls even in mixed classrooms. The researcher suggest the need for professional development for teachers to master techniques and learning styles that are tailored to meet the needs of each gender. This may call for further research in order to establish more conclusive findings concerning the influence teaching pedagogy on the students' academic performance.

Mburu's (2014) study pointed out the distraction, indiscipline inherent in mixed schools inhibits good academic performance. These findings concur with previous research by

Achoka (2013) and Kachero (2014) who postulated that mixed schools are more prone to indiscipline which diverts the students' efforts and attention from academic activities. Kachero (2014) study found that teachers dislike mixed schools due their high level of indiscipline and prefer single sex schools. This may lead to varying commitments in their professional duties where mixed schools may be disadvantaged hence poor academic performance. This could explain the reason why in Nairobi County, more girls in boarding schools registered high level of academic performance (88%) in 2017 KCSE results as compared to students in mixed (4%) and Boys day (2%) schools (See *Table 4.15).*

Oluwaseum (2016) findings contested the current and the previous studies on the significant relationship between school type and academic performance. He considered the subjects domain to be the major factor that influences academic performance. He deduced that mixed schools performs better academically than the single sex schools in certain dormains. For example girls perform better than boys in languages while boys shine in STEM subjects hence they can assist and motivate each other in their respective deficiencies. Also, in a mixed sex school, there is strong competition between the male and female student on the control of the academics. This attribute may be lacking in single sex school. However, these findings conflicts with Sampson *et al.,* (2018) whose study affirms that girls have significantly lower response to doing well in STEM whether in mixed or single sex schools. This findings could have been caused by the nature of the study which aimed at multiple outcomes such as; math performance, math attitude, science performance, educational aspiration, self- concept, and gender stereotyping.

Oluwaseum (2016) research showed that mixed schools especially in Nigeria are mostly implemented for religious purposes hence paving a leading edge in education. They are intended to create an environment which the students can interact with the opposite sex student and be able to develop good morals, share and explain ideas together. Moreover, mixed-gender environment is argued to be more conducive to the development of social skills, better preparing them for the real world (Dustmann, Ku & Kwak, 2017). A key question, therefore, is whether or not a single-sex environment improves pupils' academic accomplishments and whether the effects are common for both genders hence more investigations is desirable.

However, to some extent mixed schools in the classroom can lead to shyness or intimidation of some students. When these happen, students who are intimated or embarrassed to participate in class will end up not performing well, academically. In contemporary years, single-sex education has attracted much policy interest as a potential tool for promoting pupils' academic performance and closing various types of gender gap. Therefore more research is crucial to shed more light on this approach and to guide such policies.

Nevertheless, in line with these findings, there is evidence that school type is a possible predictor of students' academic performance hence the education stakeholders need to consider it in the enrolment of students. In this respect, parents and students should be encouraged to choose the type of school that offers the best environment for academic success. It is also clear that the effect of day school on student academic performance cannot be overemphasized as research had shown that the academic performance between students of both day and boarding school are at par.

It is clear that most successful students are boarders which further enforce the drive for the abolition of day schools which disadvantages the students' academic performance by their inherent distractions from their studies. It is undoubtedly unfair if students are held back from attaining what they could due to environments beyond their control such as school type. Although education accomplishment is important, contextual indicators continue to be the determining parameters for educational outcomes.

The findings therefore provide modest supportive evidence that students' academic engagement may vary when in these different school types as a reaction to perceived competencies and this subsequently influences academic results. According to Self Determination Theory by Deci and Ryan (1985) every school should potentially provide environment where the basic innate psychological needs of competence, relatedness/belonging and autonomy are enhanced in order to motivate the students into becoming academically more optimistic.

4.6 Academic Motivation and Academic Performance of Students in KCSE Examination

The third hypothesis of this study sought to investigate the degree of linear relationship between academic motivation and students' performance in the KCSE national examinations in Nairobi County. Academic motivation of the participants was measured using Academic Motivation Scale (AMS) High School version developed by Vallerand, *et al.,* (1992). The AMS is based on self-determination theory (SDT), a human motivation theory concentrating on individuals' motivation-related qualities and motives regulating their behavior. It has 28-items divided into seven sub scales, reflecting one sub scale of amotivation, three ordered subs cales of extrinsic motivation (identified regulation, introjected, and external regulation),

and three distinct sub scales of intrinsic motivation (intrinsic motivation to know, to accomplish things, and to experience stimulation).

The items in each sub scale were rated on a seven point scale ranging from 1 = strongly disagree to 7 = strongly agree. Each sub scale consists of four items. Thus, sub scale scores range from 4 to 28. The participants' academic motivation score was further used to categorize the participants as having either low, average or high level of academic motivation. The cut-off scores for category of low, average and high academic motivation were 18-7, -6-6 and 7-18 respectively. A high score on a sub scale indicated high endorsement of that particular type of academic motivation. The scores yielded were then correlated with KSCE examination scores.

In order to determine the relationship between academic motivation and academic performance of the students, the following null hypothesis was advanced: H_{03}: There is no significant relationship between academic motivation and academic performance. To test this hypothesis the data was subjected to correlation analysis using the Pearson's product moment correlation co-efficient shown in Table 35.

Table 35:

Pearson Product Correlation Coefficient Test for the Relationship between Academic Motivation and Academic Performance

		Academic Performance	Academic Motivation Score
Academic Performance	Pearson Correlation	1	.216**
	Sig. (2-tailed)		.000
Academic Motivation Score	Pearson Correlation	.216**	1
	Sig. (2-tailed)	.000	

**. Correlation is significant at the 0.01 level (2-tailed).

Note. N= 320

The results showed that there was a significant and positive relationship between academic motivation and academic performance of students in public secondary schools in Nairobi County (*r (318) = 0.22, P< 0.05)* at 0.05 level of significant. The null hypothesis was therefore rejected. The summary of this analysis is presented in Table 35.

The current study therefore found a significant relationship between academic motivation and academic performance of the students in Nairobi County. Girls' schools registered highest mean score in both academic motivation (8.88) and academic performance (7.91). Boys' day schools followed with a moderate academic performance and academic motivation mean score of 4.35 and 7.57 respectively. Boys' boarding and mixed schools got low academic performance score of 3.8 and 4.42 and academic motivations mean score of 5.49 and 7.16 respectively *(See Table 20).* As shown by the results, students with high levels of academic motivation stand a better chance of passing their exam. In terms of academic motivation domains, external motivation introjected had the strongest predictive power (Beta = 0.353*, t = 3.911*) to academic performance *(See Table 21).* As far as gender is concerned, girls had higher academic motivation score *(M = 8.28, SD = 4.00)* than boys *(M = 6.52, SD = 8.01)* implying that they are likely to have better academic performance (*See Table 19*).

This finding affirm previous researches by Oraib and Musa 2012, Gupta(2017), Cheilliah and Arulmoly (2017), Sikhwani (2017), Gbollie (2017), Huseyin (2017), Mutweleli (2014) which reported a statistically significant relationship between students' academic motivation and academic performance. The samples used in these studies, were similar to the one used in the present study in terms of the level of schooling. In line with these findings, it is evident that irrespective of differences of culture and locations of study, academic motivation was found to be positively correlated to academic performance. The findings of these studies

imply that students who are academically motivated are likely to achieve high academic success. Huseyin (2017) study with university students also revealed that academic motivation is a significant predictor of academic performance.

However, the findings of the present study are in disagreement with Atieh et al (2016) study focused on undergraduate students and found that the relationship between the students' academic motivation and academic performance was insignificant and negative. This implies that the level of schooling may be a significant factor in the measurement of academic motivation and academic performance. Moyosola et al (2013) study reported that academic self-efficacy, academic motivation and academic self-concept significantly predicted students' academic performance. In terms of the magnitude of contribution, academic self-efficacy made the most significant contribution to academic performance and academic motivation made the least contribution.

In addition, a study by Stofile (2017) with University students of the Free State established that academic motivation has no influence on the academic performance of second year physics students. The study however showed that self-efficacy may be the best construct of learning motivation to predict students' academic achievement. More studies are required to establish the variable with the most predictive power to academic performance among motivation and academic self-efficacy so as to design the most effective programs for enhancing students' educational. Additionally, Zubair, Khan, and Ayub (2019) found quality of teachers, teaching methodology and content as the most important factor determining college students' performance.

The current study found out the best and significant predictor of academic performance is extrinsic motivation- introjected regulation domain (Beta = 0.353, t = 3.911). Mutweleli (2015) using the sample of form three students found a negative beta weight between motivation introjected and academic motivation (β = - 0.22, p< 0.05) which indicated a negative relationship with academic achievement while extrinsic motivation identified had the highest correlation with academic motivation (r = 0.49, p < 0.01). Damianus, Theogenia, Frederi and Jean (2019) investigation with college students found intrinsic motivation to be positively related to academic performance (0.25024) while extrinsic motivation did not suggest significant relationship with academic performance (-0.01893).

Future research should clarify these mixed findings. Intrinsic motivation to know which represents the most self-determined type of motivation, depicted a negative relationship with academic performance (Beta = -.028, t= -.378) in this study. Numerous researchers found strong associations between intrinsic motivation to know and academic performance (Smith *et al.,* 2018; Ryan and Deci, 2017; Deci & Rayan, 2001; Deci, Vallerand, Pelletier, & Ryan, 1991). This implies that a student who studies owing to interest will normally outperform the one whose only aim is a good grade. The discrepancy in these findings signal the need for additional empirical and robust studies to understand more about the influence of the levels of academic domains on academic performance of the students of all level of learning.

However, a study by Ayub (2018) found that both intrinsic and extrinsic motivation were positively correlated with academic performance (*r = .563; n =200; sig = 000).* In contrast, Kariuki and Mbugua (2018) found that rewards in terms of recognition and privileges play a key role in motivation of students. For motivation to be most operational then there must be a balance of both extrinsic and intrinsic motivation. For example, it is essential to adopt intervention strategies on what the students consider as extrinsic motivation and what lead

them to know, experience stimulation, and accomplish (intrinsic). Even the person with the maximum intrinsic motivation loves to be recognized for their endeavors at times (Ayub, 2018). The extrinsic motivation provides a road marker for the intrinsically motivated individual as they continue to struggle for greatness. The significant factor is the management of this balance between intrinsic and extrinsic motivation. Educators, coaches, and parents must understand and exploit this balance to the best of their abilities.

In sum, it is evident that the relationship between school performance and academic motivation are difficult to reconcile unreservedly as it is not only highly limited, but findings have been mixed and largely inconsistent as portrayed the above studies. This could be explained by inadequate studies in academic motivation for comparison purposes. Future study is therefore recommended to better understand the relationship between these variables.

4.7 Academic Self-efficacy and Academic Performance of Students in KCSE Exam

The fourth hypothesis sought to investigate the relationship between academic self-efficacy and students' performance in the KCSE national examinations in Nairobi County. Academic self-efficacy was measured using a scale adapted from Chemers *et al.,* (2001). The scale consists of 8 items which were all positive on a 7 point Likert-type scale from 1 (Very Untrue) to 7 (Very True). Participants were asked to rate on a 1 to 7 scale how well they perceive of their competence to complete their class work or perform certain academic tasks. Thus, the maximum score that was obtained by a respondent is 56 and minimum of 8. The total score obtained by each respondent was calculated and the statistical constants for the distribution were found out. The levels of academic self-efficacy were categorized into low and high ranging from 8-32 and 33-56 respectively.

In relation to the objective, to find out if there is a relationship between academic self-efficacy and academic performance, testing of the null hypothesis was carried out. H_{04}: There is no significant relationship between Academic Self-efficacy and academic performance of the students. This hypothesis was subjected to Pearson Moment Product Correlation Coefficient using the respondents KCSE grades and their levels of academic self-efficacy. Table 36 indicates this analysis.

Table 36:

Pearson Correlation Test of Academic Self-efficacy and Academic Performance

		Academic Self-efficacy Scores	Academic Performance Scores
Academic Self-efficacy Scores	Pearson Correlation	1	.160**
	Sig. (2-tailed)		.002
	N	369	369
Academic Performance Scores	Pearson Correlation	.160**	1
	Sig. (2-tailed)	.002	
	N	369	397

**. Correlation is significant at the 0.01 level (2-tailed).

Based on the analysis of Table 36, it can be observed that the academic self-efficacy scores and academic performance have a positive and significant correlation *(r (367) = 0.160, P< 0.05)*. Therefore the null hypothesis that there is no relationship between academic self-efficacy and academic performance in the public secondary schools students in Nairobi County was rejected. The theoretical hypothesis was initially proposed and it suggested that there is no significant relationship between academic self-efficacy and academic performance in public secondary school students in Nairobi County. The findings in this study emphasize the intriguing relationships between the level of academic self-efficacy of students and their academic performance of the secondary schools students in Nairobi County.

The findings further demonstrated that secondary schools students in Nairobi County have predominantly high academic self-efficacy *(See Table 24*) irrespective of their school types (*See Table 25)* and residential status (*See Table 26).* Majority of the students with high mean in academic self-efficacy were also reported to be in the high level of academic performance. However, some respondents with high academic self-efficacy mean were found to be in the low academic performance level (See *Table 28*). When gender was put into consideration, boys had a higher academic self-efficacy than the girls (*See Table 23).*

This findings are compatible with those of relevant and most resent researchers whose studies found that general academic self-efficacy is significantly correlated with academic performance (Cayubit, 2014; Khan, 2013; Ochieng, 2015; Koseoglu, 2015; Azizollah *et al.,* 2016; Moyosola, 2013; Gopolang *et al.,* 2014; Alegre, 2014; Koloa, 2018; Honicke, 2016; Nyamwange, 2016; Hannon, 2014; Simzar *et al.,* 2015; Hwang *et al.,* 2016).

Chemers *et al.,* (2001) used the Academic Self-Efficacy scale in their study to predict the effects of academic self-efficacy on GPA and found a positive correlation between academic self-efficacy and GPA. Although a correlation was established between academic self-efficacy and GPA, no causal relationships can be inferred. These findings are further supported by Kolo *et al.,* (2017) study with college students. Goulao (2014) investigation with adult learners mirrored the previous findings. Earlier studies (Bandura, 1989, 1997; Ersanla *et al.,* 2015) also found positive correlations between academic self-efficacy and academic performance. Specifically these studies are in line with Albert Bandura, the author of Social Cognitive Theory (1986) and self-efficacy. He defines self-efficacy as to an individual's belief in his or her capacity to execute behaviors necessary to produce specific performance attainments (Bandura, 1977, 1986, 1997). This theory points to the great role self-efficacy plays in determining how an individual feelings and thought motivate themselves, which then ultimately influenced their academic performance.

Furthermore Williams and Williams (2010), Hannula *et al.,* (2014), Mae *et al.,* (2016) found a reciprocal relationship between academic self-efficacy and academic performance. In support of these findings, students with high academic abilities have also registered high academic self-efficacy in the current study. Additional findings by Hannula *et al*., (2014) showed that the relationship between self-efficacy and academic performance was stronger when students were older ($\beta = .16$ between Grade 3 and Grade 6, and $\beta = .26$ between Grade 6 and Grade 9).

Further research on how these variables relates with different age groups and over time is necessary in order to establish causality and uncover the complex interactions between academic self-efficacy and performance and cognitive variables that impact it .However, the magnitude of this correlation differ as posted by further previous study with university students which found moderate and not significant relationship between academic self-efficacy and academic performance (Honicke & Broadbent ,2016).This could mean that there are other mediating and moderating factors including effort regulation, deep processing strategies, goal orientations variables, context, content, developmental stage, parental involvement, school resources and facilities, peer influence, social-economic background, effort regulation and abilities. All these could be added to the variables of interest in future research. This supports the idea that unlike traditional psychological constructs, self-efficacy beliefs are hypothesized to vary depending on the domain of functioning and circumstances surrounding the occurrence of behavior.

It is notable that some studies reported a relationship between academic self-efficacy and academic performance in domain specific areas in like languages and the results were in favor of girls (Ersanli ,2015); Gboyega & Abdullahi, 2015; Camalo *et al.,* 2018; Tiyuri, 2018; Karen *et al*., 2017; Meera *et al*., 2015). Further studies identified a relationship between academic self-efficacy and achievements in mathematics and GPA (Tudy, 2014;

Hanon, 2014). This proves that self-efficacy belief system is not a global trait but a differentiated set of self-beliefs linked to distinct realms of functioning. Huang (2013) explained that gender difference in academic self-efficacy is largely influenced by content domain and age. Their findings should be considered more valid than the general self-efficacy approach, the reason being, that no one can acquire mastery of every realm of human life.

People diverge in the areas in which they develop their efficacy and in their respective levels in which they progress even within their given pursuits. General self-efficacy therefore can bring a problem of predictive relevance and are ambiguous just about what is being assessed. After all according to Bandura (1986), judgment of self- efficacy are task and domain specific despite the fact that empirical research using longitudinal data and domain-specific assessments is relatively scarce and seems to be completely absent in domains other than mathematics and languages. The common picture deduced from the above studies is that of a significant relationship exists between academic self-efficacy and academic performance, with some few exceptions.

Other studies failed to find any relationship between academic self-efficacy and academic performance. A study by Alyami *et al.,* (2017) revealed low yet significant correlation between academic self-efficacy and academic performance (*rs (212=.188=.003.* O'Deora's (2018) study with Indian students between 15- 18 years found a negative correlation between academic self-efficacy and academic achievement. These differences could be attributed to the context and constricted nature of the sample size as it was convenience. Cultural differences in the groups studied could be among the main factor that contributed to such mixed findings.

Since majority of empirical findings agree with the results of this study, the outcome is encouraging. It is evident that self-efficacy invoke the employment of various meta cognitive strategies and resources that are indispensable for academic performance such as effort regulation, perseverance, control of natural impulses, self-motivation and maintenance of discipline. Thus, students with lower self-efficacy who assume that their academic endeavors offers no possibility of improvement , who feel they would not be able to succeed in KCSE national examinations are less likely to target any kind of goal, mastery or performance. Students with high self-efficacy also tend to have high optimism, and both variables result in a plethora of positive outcomes: better academic performance, more effective personal adjustment, better coping with stress, and higher overall satisfaction and commitment to remain in school (Chemers, Hu, & Garcia, 2001). This can also improve performance for students with less natural aptitude for academics.

Although there is a strong relationship between self- efficacy and performance, it cannot be said that a person with low skills and high sense of self-efficacy can perform well. It takes more than a high sense of self-efficacy to produce high achievements. What self-efficacy does is influence a person to try harder and be motivated to gain the skills and then to make the best use of these skills in their performance. Very high self-efficacy can sometimes lead to degradation in performance of a particular task. This is because high self-efficacy can lead to overconfidence in one's aptitude, which creates a false sense of ability. Overconfidence can lead to employing the wrong strategy, making mistakes, refusal to take responsibility for mistakes, and rejecting corrective feedback. Overconfidence can also result in lower effort and attention being devoted to the task. In 1991, Bandura (1986) found similar results in his studies and stated that complacent self-assurance can creates little incentive to expend the increased efforts needed to attain high levels of performance. After looking at these studies, one may conclude that high levels of self-efficacy may not be as good as Bandura thought.

Nevertheless, a performance-based mindset ought to be discouraged because it largely measures one's ability to answer questions and bring up information. Other different types of intelligence that are important to students' success in life are not measured by KCSE grades. Students should be provided with opportunities to experience small wins, celebrating even the little successes, modeling motivation and hard work, and offering verbal encouragement, teachers can help their students build the self-efficacy that will serve them throughout their academic life and beyond.

According to Social Cognitive Theory by Bandura (1977), performance outcomes or past experiences, are the greatest important source of self-efficacy. Positive and negative experiences can impact the ability of an individual to perform a given task and that if one has performed well at a task previously, he or she is more likely to feel competent and perform well at a similarly associated task (Bandura, 1977). Success builds a robust belief in one's personal efficacy while failures undermine it, especially if failures occur before a sense of efficacy is determinedly established or proven (Bandura, 1997).

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter provides a summary of research findings, conclusions and recommendations from what emerged from the study. The study endeavored to establish if there is a relationship among, career aspiration, school type, academic motivation and academic self-efficacy and public secondary school students' academic performance. The findings have been summarized according to the four objectives of the study and their related null hypotheses.

5.2 Summary

5.2.1 Relationship between Career Aspiration and Academic Performance of the Students

The first objective sought to establish if the levels of career aspiration influences the students' academic performance. The findings revealed that there is a relationship between the students' level of career aspiration and their academic a performance among public secondary schools' students in Nairobi County. It is distinguished that a majority of 247 (62.2%) respondents had high career aspiration and the highest mean of academic performance (5.17) compared to 137 (34%) respondents with moderate career aspiration and an academic performance mean score of 4.70. In low career aspiration, 15 (3.8%) respondents were registered with a corresponding low academic performance mean score of 2.73. It is evident that levels of career aspiration are predictive of academic performance.

As for the null hypothesis ($H0_1$) - There is no significant relationship between career aspiration and students' KCSE performance; a chi-square *($\chi 2$)* test analysis was done, and the findings revealed that the presence of a significant relationship between career aspiration and students' KCSE performance at0.05 level of significance *(X^2= 11.85, df = 4, P = 0.019, P<0.05).* The null hypothesis was therefore rejected. It is notable that 128 students registered high career aspiration and yet they fell under the low level of academic performance. It is therefore possible that some students are likely to register high career aspiration but fail to translate this aspiration into high academic performance.

5.2.2 Relationship between School Type and Students' Academic Performance

The second objective sought to find out if school type was a factor influencing students' academic performance. The predictive value of academic performance was found to vary depending on the type of school under consideration. This empirical evidence implied that there was a relationship type of school effect on students' academic performance. The findings revealed that majority of the students from girls' boarding schools had highest mean of academic performance *(m = 7.91*). This is in comparison to boys day schools (*m = 4.35),* boys' boarding (*m =3.88)* and mixed schools (*m = 3.42*) with schools the lowest mean of academic performance.

However, across all school types, only about 12.6% of the total respondents had high level of academic performance and 31% had moderate level of academic performance. More than half of all the respondents (56%) fell under low level of academic performance. For the null hypothesis ($H0_2$) - There is no significant relationship between school type and students' KCSE performance; a chi-square (X^2) test analysis was done, and the findings showed that there is a relationship between school type and students' KCSE performance in 2017 *($X^2(6)$ = 217.862, p = 0.00*. As a result, the null hypothesis was rejected.

5.2.3 Relationship between Academic Motivation and Academic Performance of the Students

This objective sought to establish whether academic motivation is associated with the students' academic performance. Majority of the respondents had high academic motivation score (sk=-0.79) with girls boarding having the highest academic motivation mean score of 8.88 compared with boys day with a mean of 7.57 and mixed schools at 7.16. Surprisingly, the best and significant predictor of academic performance in terms of academic motivation domains was extrinsic motivation- introverted (*Beta = 0.353, t = 3.911*) which is least autonomous and lowest in self-determination continuum (Deci & Ryan, 2000) because it generate controlled motivation. The null hypothesis (H_{o3}): There is no significant relationship between academic motivation and students' KCSE performance; Pearson's product moment correlation coefficient was used. The results showed that there was a significant and positive relationship between academic motivation and academic performance of students in public secondary schools in Nairobi County *(r (318) = 0.22, P< 0.05).* The null hypothesis was therefore rejected.

5.2.4 Relationship between Academic Self-efficacy and Academic Performance of the Students

The fourth objective of the study was to investigate the relationship between academic self-efficacy and academic performance of the students in Nairobi County. Majority of the students who were found to have high level of academic self-efficacy had an average of grade of C^- (5.05) in KCSE national examination in 2017 while those with low levels of academic self-efficacy had an average of D grade (3.7). In terms of school type, all the respondents in Boys' day schools were in the high level of academic self-efficacy (100%). The Pearson (r) linear correlation analysis was carried out for testing the relationship between academic self-efficacy scores and academic performance. The results showed a positive and

significant correlation *(r (367) = 0.160, P< 0.05)*. Therefore, the null hypothesis that there is no relationship between academic self-efficacy and academic performance in the public secondary schools students in Nairobi County was rejected.

5.3 Conclusion

The results of this study presented some evidence of the existence of the relationship between career aspiration, school type, academic motivation, academic self-efficacy and academic performance. These findings are consistent with the conceptual framework that was initially developed to show the interaction of the variables in the study. It was projected that the school type and levels of career aspiration, academic motivation and academic self-efficacy would impact on academic performance in students. The hypothesized relationship drawn from SDT and SCT theories, and from the appraisal of previous related studies, indicated that the learning behaviors of the students are shaped by their career goals (career aspiration), context (school), their belief systems (self-efficacy) and their drives (motivational levels).

However, SDT did not address the possibility of overlapping of the various motivational domains as well as issues of intrinsically and extrinsically motivation in different subjects' areas as well as the influence of personality on motivation and vice vasa. It also lacks a developmental focus where it is important to know in which stage of development is a student most intrinsically or extrinsically motivated. Future research should address these areas in order to bring more clarity and understanding in these theoretical perspectives. Social cognitive theory on the other hand did not address the issue of over efficaciousness which can lead to complacency and subsequent poor performance. Over-efficaciousness may negatively affect students' motivation, so that students who believed they were capable had less motivation for study.

The study showed a relationship between career aspiration and academic performance. This highlights the importance of evaluating how educational choices are made during secondary education. This will help the students to channel their academic endeavors towards the right career and meet the demand of the 21st century for competency and productivity. These are obtainable when informed career decision is made at secondary school level where the students make subjects selection which determines their future careers.

The schools' career guidance that is based on personal assets of the students' remains the only vehicle to argument career aspiration. Thus, it is paramount that, educators and counselors focus on encouraging exploration of all career options that are suitable for students and challenge the long-held articulations of traditional gendered careers or stereotypes t so that students can explore wider educational opportunities. To ensure the long-term prosperity of our Nation, we must renew our collective commitment to excellence in education and development of students' talents while at school.

The school type had a significant influence on academic performance with Girls' boarding having the highest respondents in the high level of academic performance compared with other types of schools. The school climate may provide an environment for students' utilization of their full potential is. The schools should have a positive atmosphere that promotes academic achievements regardless of the students' academic abilities. Given the known benefits that accrue to girls' boarding schools' more of them should be established and parents should be encouraged to register their daughters in them. It is undeniable that some schools operate with sparse resources hence the government should ensure equity in their distribution across all schools types to ensure that all secondary schools students are provided with access to a well-rounded education. Progressively, all schools should be open for entry to all students so as discard discrepancies created by classification of schools.

Academic motivation was also found to be predictor of students' academic performance. In the academic context, knowing different types of motivation gives possibilities for better teaching within an educational process because each type of motivation has specific impact on learning, performance, personal experience and individual's well-being. When academic motivation domains were analyzed it was found that extrinsic motivation domain- introjected had more influence on academic achievement than others. Introjection describes a type of internal regulation that control and pressurize people into performing actions for the purposes of avoiding guilt or anxiety or to attain ego-enhancements or pride. Introjected regulation is a based on socially defined norms.

When an individual conforms to the norms, their feeling of self-worth is increased. Therefore this domain should be increased by creating opportunities both academic and non-academic where students can experience success that bolster their self-esteem. This can also be accompanied by incentives and verbal encouragement. However, it is also important to nurture the students' intrinsic motivation which is significant and positively associated with high academic performance because of the ability to sustain efforts in the absence of any other form of motivation. The concept of intrinsic motivation, or engaging in activities for the inherent rewards of the behavior itself, plays an important role in self-determination theory. It is important for education stakeholders to consider ways of creating learning environments that catalyze intrinsic motivation in students. For example,, efforts must be acknowledged by the teacher to make the students feel competent and autonomous to some degree or through lessons that encourage curiosity, exploration, and self-direction.

A relationship was found between academic self-efficacy and academic performance. Research has regularly shown that self-efficacy is a strong predictor of performance and student motivation. Based on the present findings, it is advisable that educators focus and pay more attention on developing the construct of self-efficacy from early years of education. It appears that this would allow the students to achieve during educational course and be better prepared to succeed when they make the transition to a university level. For example, the Bandura's (1989) four sources of self-efficacy (mastery experiences, modeling, social persuasion, and managing physiological arousal) should be integrated and encouraged into the teaching- learning process. Individuals use these four sources of information to magistrate their capability and complete future tasks.

Teachers can modify their instructional strategies with minimal training and effort, and this can result in increases in their students' self-efficacy. Teachers who capitalize on the influence of these sources is likely to produce more confident students in academic skills. In so doing students will be directed on how to handle failure, to emulate high-achieving role models, to devise ways for overpowering academic obstacles and to initiate tactics for managing academic performance anxiety and procrastination .

Moreover, teachers should be trained to be efficacious. According to Bandura (1996) efficacious teachers are better planners, more resilient through failure, and more open-minded and reassuring with students. Collective teachers' self-efficacy therefore stimulates growth and change in their students. It then true that schools in which teachers have a high sense of efficacy about their teaching capabilities may find it easy to motivate their students into academic success. Low efficacious teachers may depend on more controlling teaching style and may be more dangerous of students which impede academic self-efficacy. Further

remedial assistance should be provided for low performing students to increase their success and increase their self-efficacy.

5.4 Recommendations

Based on the findings of the study, the following recommendations for policy and further research were made:

5.4.1 Policy Recommendations

i. The students' poor outlook of their schools (mostly sub-county schools) should be improved. The National and County governments should therefore endeavor to set apart in the monetary allocations to increase learning facilities in mixed schools, just as it is done in extra- county and national schools. This will ensure equity and fairness in education by basically making sure that type of school does not become an obstacle to achieving educational potential.

ii. The findings of this study have shown that school type, career aspiration, academic motivation and academic self-efficacy have a positive and significant predictive value on students' academic performance. Policy makers may initiate policy that promote advocacy concerning these variables in secondary schools. This may include intervention programs to enhance career information, academic motivation and academic self-efficacy of the students.

iii. Kenya Institute of Curriculum Development (KICD) may also develop and monitor the implementation of a curriculum that takes into account these variables. Consequently, this knowledge will impact on students' academic achievement.

iv. Educational trainers should contemplate a framework of professional development for teachers which include methodologies of instilling career aspiration, academic motivation and academic self-efficacy.

5.4.2 Recommendations for Further Research

The following suggestions were made for consideration for future research:

i. Future research is recommended in the unstudied variables such as; parental and teachers' characteristics, students' personality, quality and quantity of guidance and counseling, schools' facilities and resources and teaching pedagogy which might influence academic outcome. This might help to understand more of what interventions are needed in the educational system to help foster students' academic success.

ii. In the current study, a questionnaire was used to measure students' career aspiration, academic motivation and academic self-efficacy. It is possible that response biases (social desirability, acquiescence) impacted the results in unknown ways and perhaps interviews and focused group discussions with students would allow for crosschecking the consistency of the responses. However, given the detailed nature of the data collection, the impact of response biases may be minimal.

iii. The research design used in this study is correlation in nature, thus, confident causal conclusions cannot actually be drawn from my data. For example, it is possible that academic performance is a predictor of career aspiration, academic motivation and academic self-efficacy or all variables involved predict each other. Other designs can be used to determine causal relationship of the study variables.

iv. The relationship between the dependent and independent variables are examined at a single point in time that is using 2017 KCSE examination results. One may not precisely and fully judge the causal relationship between the variables using a single exam that could have been marred by psychological factors like exam anxieties. Further research into how these variables relate over time is necessary in order to uncover the complex interaction between them, their influence in different stages of physical and educational development of the students by use of longitudinal study. This can provide better insight

for researchers to understand various interventions that can be applied to reduce the effect of these factors.

v. The current study found a statistically significant relationship between the determinants of career aspiration (school type, academic motivation, and academic self-efficacy) and academic performance. Further research is recommended to establish the variable among them with the most predictive power to academic performance.

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APPENDICES

Appendix A

Students' Consent Form to Participate in the Study

This is a research study designed to investigate the relationship between the relationship between factors of career aspiration (school type, academic motivation and academic self-efficacy) and academic performance of the students. The findings will help to enhance these factors for better academic outcome. I would like to request you to complete this research questionnaire which will take about 40 minutes in order to facilitate in this noble task. Remember that all the information you give will be treated with ultimate confidentiality. There is no potential harm or risks involved in taking part in this exercise. However, you are allowed to withdraw from this exercise any time if you so wish. Kindly sign the space provided if you agree to participate in this study.

I agree to participate in this study _____ Date_____

Thank you for accepting to participate in the study.

Yours faithfully,

Margaret Nduta Mwaura

PhD Student, Maasai Mara, University

Appendix B:

Students' Questionnaire

Please note the following:

- This is NOT a test, but a questionnaire for which you have all the answers to every question.
- There is NO right or wrong answers.
- Questions relate to how you feel about the activities in learning. Your opinion is required.
- Please do not write anything else on this questionnaire except your response.
- Write all your responses in the spaces provided.
- Please choose ONLY ONE response to every question.
- Provide your choice to each statement TRUTHFULLY.
- Please note that your identity will be treated confidentially and will not be revealed in any circumstances.
- All your responses will be treated confidentially

PART I: BACKGROUND INFORMATION

Please read the following questions carefully and fill in the blank spaces or put a tick (√) in the brackets where appropriate.

1) Admission number of the student _____

2) Index number of the student _____

3) Name of school_____

4) Type of school: Girls Boarding ( ) Boys day ( ) Boys Boarding () Mixed ( )

5) Category of your school: National ( ) Extra - County ( ) County ( ) Sub-County ( )

6) Residential status:

A boarder ( )A day scholar ( )

7) Gender: Boy ( ) Girl ( )

PART II: CAREER ASPIRATIONS QUESTIONNAIRE

Please TICK (√) the appropriate response to the question

8) I will seek to pursue a university degree after Form 4 KCSE examinations.

Yes ( ) No ( ) Not Sure ( )

9) After KCSE examinations I will enroll for a college certificate or diploma.

Yes ( ) No ( ) Not Sure ( )

10) I will seek direct employment after Form 4 KCSE examinations.

Yes ( ) No ( ) Not ( )

11) I have no career desires so far

Yes ( ) No ( ) Not sure ( )

12) Career desires are not necessary when one is learning

Yes ( ) No ( ) Not sure ( )

14) Are you aware of various career options available in Kenya?

Yes ( ) No ( ) Not Sure ( )

PART III: ACADEMIC MOTIVATION SCALE

Using the scale below, indicate to what extent each of the following items presently corresponds to one of the reasons why you go to school. Encircle /tick your choice.

1 Strongly Disagree (SD): 2 Disagree (D): 3 Moderately Disagree (MD): 4 Undecided (UD): 5 Agree(A): 6 Moderately Agree (MA): 7 Strongly Agree (SA).

"REASON WHY YOU GO TO SCHOOL"

S/NO	**Academic Motivation Domains**	**SD**	**D**	**MD**	**UD**	**A**	**MA**	**SA**
	Intrinsic motivation—to know							
1	Because I experience pleasure and satisfaction while learning new things.							
2	For the pleasure I experience when I discover new things never seen before.							
3	For the pleasure that I experience in broadening my knowledge about subjects which appeal to me.							
4	Because my studies allow me to continue to learn about many things that interest							
	Intrinsic motivation towards accomplishment	**SD**	**D**	**MD**	**UN**	**A**	**MA**	**SA**
5	For the pleasure I experience while surpassing myself in my studies.							
6	For the pleasure that I experience while I am surpassing myself in one of my personal accomplishments.							
7	For the satisfaction I feel when I am in the process of accomplishing difficult academic activities.							
8	Because school allows me to experience a personal satisfaction in my quest for excellence in my studies.							

	Intrinsic. motivation to experience stimulation	**SD**	**D**	**MD**	**UN**	**A**	**MA**	**SA**
9	For the intense feelings I experience when I am communicating my own ideas to others.							
10	For the pleasure that I experience when I read interesting authors							
11	For the pleasure that I experience when I feel completely absorbed by what certain authors have written.							
12	For the ‘‘high’’ feeling that I experience while reading about various interesting subjects.							
	Extrinsic motivation-identified regulation	**SD**	**D**	**MD**	**UN**	**A**	**MA**	**SA**
13	Because I think that a school education will help me better prepare for the career I have chosen.							
14	Because eventually it will enable me to enter the job market in a field that I like.							
15	Because this will help me make a better choice regarding my career orientation.							
16	Because I believe that a few additional years of education will improve my competence as a worker.							
	Extrinsic motivation—introjected regulation	**SD**	**D**	**MD**	**UN**	**A**	**MA**	**SA**
17	To prove to myself that I am capable of							

	completing my school degree.							
18	Because of the fact that when I succeed in school I feel important.							
19	To show myself that I am an intelligent person.							
20	Because I want to show myself that I can succeed in my studies.							
	Extrinsic motivation — external regulation	**SD**	**D**	**MD**	**UN**	**A**	**MA**	**SA**
21	Because with only a high school KCSE certificate, I would not find a high paying job later on.							
22	In order to obtain a more prestigious job later on.							
23	Because I want to have ‘‘the good life’’ later on.							
24	In order to have a better salary later on.							
	Amotivation	**SD**	**D**	**MD**	**UD**	**A**	**MA**	**SA**
25	Honestly, I don’t know; I really feel that I am wasting my time in school.							
26	I once had good reasons for going to school (medical); however, now I wonder whether I should continue.							
27	I can’t see why I go to school and frankly, I couldn’t care less.							
28	I don’t know; I can’t understand what I am doing in school.							

PART IV: ACADEMIC SELF-EFFICACY (8 ITEMS)

Academic Self-Efficacy and Efficacy for Self-Regulated Learning-8 items.(Adapted from Zimmerman, Bandura, & Martinez-Pons, 1992; Chemers, Hu, & Garcia, 2001)

Please tick (√) against the response that best suits you. Please use the scale below to respond to the following 8 items. (How closely you agree or disagree with the following statements)

Very Untrue	Untrue	Somewhat Untrue	Not sure	Somewhat True	True	Very True
1	2	3	4	5	6	7

		1	2	3	4	5	6	7
1	I know how to schedule my time to accomplish my tasks.							
2	I know how to take notes.							
3	I know how to study to perform well on tests.							
4	I am good at doing my own studies and complete assignments .							
5	I am a very good student.							
6	I usually do very well in school and at academic tasks.							
7	I find my academic work interesting and absorbing.							
8	I am very capable of succeeding at this college.							

Appendix C:

Scoring of Academic Motivation Scale

Key for AMS High School version -28 items

Item	Type/ domain/orientation of Motivation measured
1, 2, 3,4	Intrinsic motivation - to know
5, 6, 7, 8	Intrinsic motivation - toward accomplishment
9, 10, 11, 12	Intrinsic motivation - to experience stimulation
13, 14, 15, 16	Extrinsic motivation - identified
17, 18, 19, 20	Extrinsic motivation - introjected
21, 22, 23, 24	Extrinsic motivation - external regulation
25, 26, 27, 28	Amotivation

Calculations;

To get the respondents' score on the AMS, the mean response for each of the sub-scales was calculated. These means ranges between 1 and 7. The calculated means were fitted into the formula shown below and which was used to arrive at a self-determination index which was taken as the participant's academic motivation score. The formula had been adapted from Mutweleli (2014) who had adapted it from Vallerand, Pelletier, Blais, Briere, Senecal, and Vallieres (1992).

$2\{(IMk+Ima+Ims/3)\} + Emi - \{(IMij+Emer/2) + 2amo\}$ = Academic Motivation.

This formula gives scores ranging from -18 (lowest self-determination/academic motivation) to +18 (highest self-determination/ high academic).

The highest level of self-determination will therefore be, 2((7+7+7/3)) + 7 - ((1+1/2) +2 (1) which totals to 18.

Abbreviations: ***Key:*** Imk = intrinsic motivation to know; Ima= intrinsic motivation to accomplishments; Ims = intrinsic motivation to experience stimulation; Imi = Extrinsic motivation identification; Imer = Extrinsic eternal regulation; amo =amotivation.

Appendix D:

Four Years KCSE Performance Trend in Nairobi County

Year	Cadt.	A	A-	B	B+	B-	C+	C	C-	D+	D	D-	E	MS
2014	22231	465	1197	1240	1218	1380	1475	1773	2332	2927	693	3832	3832	5.0
2015	23307	372	1189	1341	1379	1549	1681	1975	2423	3035	3916	3811	636	5.3
2016	25258	41	622	1025	169	1159	1229	1414	1722	2304	3712	7744	3217	4.0
2017	26477	32	431	768	888	974	1170	1426	1850	2625	4228	8929	3156	3.6

KEY: Cadt = Candidates; MS= Mean Score

Source: Kenya National Examination Council, (2018).

Appendix E:
Time Plan

ACTIVITY	2013-2014	2015				2016				2017				2018			2019			
	Jan-Dec	Jan-Ap	M-J	A-S	O-D	J-M	A-Ag	S-O	N-D	J-M	J-J	S-O	N-D	J-A	A-S	O-D	Jan-J	J-O	N	D
Course work																				
Identification of research problem																				
Writing concept paper																				
Presentation and correction o concept paper																				
Writing of proposal																				
Departmental presentation of proposal and correction																				
School' presentation and correction																				
Survey of Nairobi seconds schools																				
Pilot study																				
First Phase of data collection																				
Data sorting and cleaning																				
Second phase of data collection																				
Data organization and analysis																				
Report writing																				
Submission of first draft to supervisor and corrections																				
Submission of the draft to external examiner																				
Correction and final submission																				
Graduation																				

Appendix F:

Research Permission from Maasai Mara University Post- Graduate Studies

MAASAI MARA UNIVERSITY

(OFFICE OF THE DIRECTOR, POSTGRADUATE STUDIES)

TEL. No.0722346 419
Email: graduatestudies@mmarau.ac.ke

P. O. Box 861-20500
NAROK, KENYA

REF: MMU/AA0328/45/2016/VOL1 (20) **DATE**: 21st June, 2017

Courtcil Secretary,
National Commission for Science, Technology & Innovation
P.O. Box 30623-00100
NAIROBI-KENYA

Dear Sir/Madam,

RE: APPLICATION FOR RESEARCH PERMIT: REG. NO. DE04/4021/2012 – MWAURA MARGARET NDUTA

I wish to recommend the above candidate for a permit to enable her collect data for her research. She defended her proposal at the School of Education successfully and has made the necessary corrections. The title is ***"Relationship Between Selected Correlates of Career Aspiration and Academic Performance of Students in Public Secondary Schools in Nairobi County, Kenya."***

She therefore qualifies for a permit to conduct research. Any assistance accorded to her will be highly appreciated..

MAASAI MARA UNIVERSITY
P. O Box 861 - 20500
NAROK
21 JUN 2017
DIRECTOR
BOARD OF POSTGRADUATE STUDIES

Thank you.

Prof. Edward K. Tanui
Ag. DIRECTOR POSTGRADUATE STUDIES

Appendix G:

Research Authorization from Nairobi County Director of Education

Republic of Kenya
MINISTRY OF EDUCATION
STATE DEPARTMENT OF BASIC EDUCATION

Telegrams: "SCHOOLING", Nairobi
Telephone: Nairobi 020 2453699
Email: [illegible]
[illegible]

When replying please quote

Ref: RCE/NRB/GEN/1/VOL. 1

REGIONAL COORDINATOR OF EDUCATION
NAIROBI REGION
NYAYO HOUSE
P.O. Box 74629 – 00200
NAIROBI

DATE: 13th July, 2017

Margaret Nduta Mwaura
Maasai Mara University
P O Box 861-20500
NAROK

RE: <u>RESEARCH AUTHORIZATION</u>

We are in receipt of a letter from the National Commission for Science, Technology and Innovation regarding research authorization in Nairobi County on **"Relationship between selected correlates of career aspiration and academic performance of students in public secondary schools."**

This office has no objection and authority is hereby granted for a period ending **6th July, 2018** as indicated in the request letter.

Kindly inform the Sub County Director of Education of the Sub County you intend to visit.

JUL. 2017

FLORENCE HUNGI
FOR: REGIONAL COORDINATOR OF EDUCATION
NAIROBI

C.C
Director General/CEO
Nation Commission for Science, Technology and Innovation
NAIROBI

Appendix H:

Research Authorization From National Council For Science, Technology, and Innovation (Nacosti)

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone:+254-20-2213471,
2241349,3310571,2219420
Fax:+254-20-318245,318249
Email: dg@nacosti.go.ke
Website: www.nacosti.go.ke
When replying please quote

9th Floor, Utalii House
Uhuru Highway
P.O. Box 30623-00100
NAIROBI-KENYA

Ref: No. **NACOSTI/P/17/63400/17992**

Date: **7th July, 2017**

Margaret Nduta Mwaura
Maasai Mara University
P.O. Box 861-20500
NAROK.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on ***"Relationship between selected correlates of career aspiration and academic performance of students in public secondary schools in Nairobi County, Kenya,"*** I am pleased to inform you that you have been authorized to undertake research in **Nairobi County** for the period ending **6th July, 2018.**

You are advised to report to **the County Commissioner and the County Director of Education, Nairobi County** before embarking on the research project.

On completion of the research, you are expected to submit **two hard copies and one soft copy in pdf** of the research report/thesis to our office.

GODFREY P. KALERWA MSc., MBA, MKIM
FOR: DIRECTOR-GENERAL/CEO

Copy to:

COUNTY COMMISSIONER
NAIROBI COUNTY
P.O. Box 30124-00100, NBI
TEL: 341666

The County Commissioner
Nairobi County.

The County Director of Education
Nairobi County.

Appendix I:

NACOSTI Research Permit

THIS IS TO CERTIFY THAT:
MS. MARGARET NDUTA MWAURA
of MAASAI MARA UNIVERSITY,
28263-100 NAIROBI,has been permitted
to conduct research in *Nairobi County*

on the topic: *RELATIONSHIP BETWEEN SELECTED CORRELATES OF CAREER ASPIRATION AND ACADEMIC PERFORMANCE OF STUDENTS IN PUBLIC SECONDARY SCHOOLS IN NAIROBI COUNTY,KENYA*

for the period ending:
6th July,2018

Mwaura
.....
Applicant's Signature

Permit No : NACOSTI/P/17/63400/17992
Date Of Issue : 7th July,2017
Fee Recieved :Ksh 2000

.....
Director General
National Commission for Science, Technology & Innovation

Appendix J:

Proposed Budget

Items Cost	**(Ksh)**
Stationery	10, 000
Printing	98, 000
Photocopying	68, 000
Traveling	50, 000
Secretarial services	58, 000
Binding	59, 000
Miscellaneous	20, 000
Total	**365,000**

Appendix K:

Map of Nairobi County

Source: Retrieved from https://www.touristmapskenya.com/index.php?option=com_content &view=article&id=83&Itemid=9