

**EMOTIONAL INTELLIGENCE AND ACADEMIC SELF-EFFICACY BELIEFS
AS PREDICTORS OF ACADEMIC ACHIEVEMENT AMONG FORM FOUR
STUDENTS IN KIAMBU COUNTY, KENYA**

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DECLARATION

I declare that this project is my original work and has not been presented in any other university or institution for consideration. This research project has been complemented by referenced sources duly acknowledged. Where text, data (including spoken words), graphics, pictures or tables have been borrowed from other sources, including the internet, these are specifically accredited and references cited in accordance and in line with anti-plagiarism regulations.

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DEDICATION

This work is dedicated to my Congregation of the Sisters of Mary Immaculate of the Archdiocese of Nyeri for their love, encouragement and support when I was pursuing my studies. To my beloved parents who gave me the precious gift of life and laid a solid academic foundation that has led to this accomplishment. To my dear brothers and sisters who in love and communion have supported me this far.

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ABBREVIATIONS AND ACRONYMS

EI	Emotional Intelligence
KCSE	Kenya Certificate of Secondary Education
SE	Self-Efficacy
SEQ	Self-Efficacy Questionnaire
SPSS	Statistical Package for Social Sciences

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ABSTRACT

The aim of this study was to establish if emotional intelligence and academic self- efficacy beliefs significantly predict academic achievement among form four students in public secondary schools in Kiambu County, Kenya. Specifically the study sought to find out the relationship between emotional intelligence, academic self-efficacy beliefs and academic achievement and to develop the prediction equation of academic achievement from emotional intelligence and academic self-efficacy beliefs. The study was anchored on social cognitive theory developed by Bandura in 1986. This study used correlational research design. Data were collected from 11 secondary schools out of 43 secondary schools in Kiambu Sub-County. The study sample comprised of 390 students from the 11 secondary schools. Two types of sampling procedures; proportionate sampling and simple random sampling were used to select the sample. The form four students who participated in the study were selected using simple random sampling. Self-Efficacy Questionnaire and emotional intelligence scale were used as the primary tools to collect data. Pilot study was conducted in one school in Kiambu Sub County to establish the validity and reliability of the research tools. Demographic data were analyzed by use of descriptive statistics and emotional intelligence, academic achievement and self-efficacy data were analyzed by use of inferential statistics (Pearson correlation, regression analysis and one way ANOVA) with the help of SPSS. The findings revealed that emotional intelligence and academic achievement had a significant positive relationship ($r(374) = .24, p = .00$). The results of one way ANOVA on the mean differences in academic achievement scores based on the three levels of emotional intelligence, showed that the three groups differed significantly. A significant positive correlation was found between academic self-efficacy and academic achievement ($r(374) = .23, p < .05$). Further analysis using one way ANOVA showed that there were significant mean differences in academic achievement scores of the students with different levels of academic self-efficacy ($F(2, 371) = 7.32, p < .05$). Post hoc analysis results using Tukey's Honestly Significant Difference indicated that academic achievement scores of students with low and high academic self-efficacy beliefs differed significantly. Regarding the prediction of academic achievement from emotional intelligence domains and academic self-efficacy, the results indicated that the independent variables significantly predicted the dependent variable ($F(6, 367) = 9.29, P = 0.00$). The study makes the following recommendations; student counsellors, teachers and school administrators should come up with training program for students on the development of emotional intelligence skills. Curriculum designers and education planners should include academic self-efficacy training in the course content so that all secondary school students are equipped with these skills to improve learning outcomes. All the stakeholders in education sector should ensure that secondary schools provide positive learning experiences to enhance development of cognitive constructs that enhance academic achievement.

CHAPTER ONE

INTRODUCTION AND BACKGROUND TO THE STUDY

1.1 Introduction

In this chapter, background to the study, statement of the problem and purpose are discussed. The chapter also presents research objectives, hypotheses, significance, limitations and delimitations, theoretical and conceptual framework and operational definition of terms.

1.2 Background to the Study

Across the world, education is considered as an important factor that contributes to success in an individual's life, improvement in the quality of life and general well being of any society. Academic success is closely linked to a person's life success chances, income and well being (Battle & Lewis, 2002). Due to the significant role that secondary education plays in improving the quality of life and general well being of any society, parents, governments and other stakeholders have continued to invest heavily in education. Investment in secondary education is desirable especially for most of the developing countries because it is the cheapest gateway to equipping the adolescents with core competence skills that require abstract reasoning that they can use to live productively as members of society. Secondary education is key to any balanced strategic planning in national development since it forms a basis for democratic governance, development in competitive manufacturing and service industries.

The grand scale of resources invested in education by both public and private players call for a concerted effort to ensure quality in learning outcomes. The most commonly used method to determine the extent to which learning has taken place is the use of

achievement tests. The outcomes of these tests are used to make judgements on the effectiveness of schooling. Empirical evidence indicate that the greatest challenge facing secondary education in many countries across the world is academic underachievement. Fearon (2012) noted that USA students performed dismally in the Program for International Students Assesment (PISA) and the Trends in International Math and Science Study (TIMSS) compared to other students from economically developed countries. The poor performing students are denied an opportunity to enter into a more rigorous curricular which not only destabilizes an individual but also causes serious ramifications to the stability of the society.

In Nigeria, Kola (2014) reported that there was far below average performance in most secondary schools in West African School Certificate Examination (WASCE) and noted that this problem could be traced to several factors associated with parents, teachers, students and schools. The researcher indicated that poor academic performance constituted wastage of resources invested in secondary education. Since education plays a crucial role in social welfare and national development, the researcher recommended that all the stakeholders should be responsive in their roles in order boost academic achievement. Okoko (2012) stated that 85% of secondary school students in Uganda performed below the set standards. The researcher noted that the problem was widespread and required immediate intervention to avoid wastage of resources and realize the promises of education.

In Kenya, high premium is put on academic achievement which has seen it being used to measure the quality of educational program, certification and placement in further studies and employment. Any debate on how well educational objectives have been

achieved revolves around the quality of academic grades learners score. Owing to the significance of academic achievement in educational measurement, policy makers, educational psychologists and other stakeholders have been interested in this variable; the factors that influence it and how it can be enhanced.

Since the introduction of subsidized secondary education in the year 2013, Kenyan public secondary schools have been experiencing substantial increase in enrolment. Despite huge investment in the education sector, in the recent past statistics have shown that more than half of the students who sit for KCSE every year score a mean grade of D+ and below. For example in the year 2016, 295 463 out of 574, 125 candidates scored grade D and below, in the year 2017, of 615 772 candidates who sat the KCSE examination, 438, 914 scored grade D plus and below and in the year 2018, 343, 897 out of 660, 204 candidates scored grade D and below (KNEC KCSE statistics, 2018). The large number of students (more than half of the candidates) who get the lower grades is a worrying trend that should serve as a wakeup call to educational researchers and all education stakeholders to provide a lasting solution. This poor academic achievement means that the students involved will miss opportunities in higher education and employment.

Kiambu sub-county is not any better. Approximately 70% of the students who sat for KCSE in 2016, 2017 and 2018 scored a mean grade of D+ and below, a skewed performance whose causes needs to be unraveled by researchers and appropriate mitigation measures taken to avoid wastage of resources.

Table 1. 1

Kiambu Sub-County KCSE Analysis from 2016 to 2018

Year	Grades								
	A	A-	B+	B	B-	C+	C	C-	D+ and below
2016	0	9	68	99	138	148	206	239	1612
2017	0	5	29	73	97	122	176	263	1765
2018	1	24	59	131	124	165	198	248	1174

Source. Sub-county Education Office (2019)

There is an abundance of literature on the factors that influence academic achievement. Mutweleli (2014) states that the strategies students use in school to go about their learning and the factors that predict their academic achievement have continued to be areas of interest for educational researchers as well as many stakeholders in education.

Educational researchers have cited three main factors that influence academic outcomes namely; learning environment factors (Nyagosia, 2011), student characteristics such as academic motivation, self-handicapping, self-regulation, academic identity status and goal setting (Wawire, 2010; Okoko, 2012; Mutweleli, 2014; Ileri, 2015) and interaction of contextual and personal factors (Kwena, 2007; Ongowo & Hungi, 2014). These studies established that the factors stated above

influence academic achievement and any effort to find solutions to academic problems should be informed by the three factors.

The locale of the studies and samples used limit the generalization of the findings to Form Four students in Kiambu sub County, hence the need for this study to address these concerns. This study intended to investigate how emotional intelligence and self-efficacy beliefs predict academic achievement among secondary school students in Kiambu sub-county.

According to Bar-On and Parker (2000) emotional intelligence is the ability to communicate, feel, use remember, recognize, describe, learn from and manage emotions of one self and those of others. Educational psychologists have studied extensively emotional intelligence as a predictor of academic achievement. Farooq (2003) reported that student's emotional management skills were significantly related to academic performance. Emotional intelligence is a level of social intelligence that is responsible for the quality of social interactions in learning contexts. It gives the students the power to manage their emotions and those of others as well as directing their thinking processes and actions. Generally emotional intelligence encompasses unique aspects of internal and external processes such as temperament and stress management skills which influence learning.

The debate on gender differences in emotional intelligence and whether it varies with age is still on since empirical evidence is inconclusive. Hassan, Sulaiman and Ishak (2009) examined 223 students from form one to form four and found that male and female students differed significantly in their emotional regulation strategies. However,

the results showed significant differences in emotional regulation strategies among female participants of different ages. It was also established that all the students differed significantly in their emotional intelligence skills across the genders. EI was also found to have a positive significant correlation with academic performance based on the age and gender of the students. There is also evidence that emotional intelligence plays a significant role in student adjustment as they move from secondary school to university (Farooq, 2003).

Emotional intelligence consists of five domains; interpersonal skills, self motivation, self awareness empathy and emotional management. Yahaya et al. (2011) reported that there was a significant positive correlation between empathy ($r = .21$), emotional management ($r = .21$) and self-awareness ($r = .21$) at the level of $p < .05$ with academic performance. Ogundokun and Adeyemo (2010) established that emotional intelligence, age and academic motivation were predictors of academic achievement with a significant positive correlation ($r = .736$). In Kenya, there is a scarcity of literature on the association between emotional intelligence and academic achievement which prompted this study to be carried out.

Self-efficacy beliefs emerged with the social learning theory developed by Bandura (1986). According to Bandura, self efficacy refers to personal beliefs about one's abilities to successfully complete a task. Academic self-efficacy is the belief about the extent to which an individual feels herself or himself capable of completing a learning task successfully. Self efficacy beliefs influence an individual's course of action, persistence, resilience in the face of failure and the effort put forth to achieve goals. At the same time the desired goals influence self efficacy. Schunk (2009) noted that

students' academic goals, how they are motivated, and academic achievement affect their self-efficacy in learning and academic success.

There is considerable evidence that academic self efficacy greatly influences academic achievement (Parajes, 1996; Parajes & Kransler, 1994, 1995). Empirical evidence has confirmed that learners with high self-efficacy do better in challenging tasks than students with low self-efficacy. Learners with high self-efficacy appear to use more strategies which result to higher achievement (Hawthorn, 2004). As indicated by the studies, self-efficacy is acknowledged as a factor that has a significant effect on students' learning outcomes. Students with high academic self efficacy beliefs adopt effective self regulated strategies that significantly predict academic achievement. Therefore, typically students who are self regulated are high achievers in academics. However, there is an inconsistency regarding self-efficacy and prediction of behavior. James (1981) asserts that an individual who believes that an outcome of a certain behavior will result to undesired effects avoids engaging in that activity. Therefore, it was interesting to examine the relationship between academic self efficacy and academic achievement since the previous studies were not focused on the specific type of self efficacy.

Locally, Ochieng (2015) noted that self-efficacy levels predicted achievement in mathematics. Ochieng' recommended that there was need for a study to investigate how self-efficacy beliefs predict overall academic achievement. Moturi(2012) reported that highly self-efficacious students performed better in achievement tests than lowly self-efficacious students. The locations and samples used in the studies limit generalization of the results to a population of students in Kiambu Sub County. Therefore, a similar

study in Kiambu Sub County was necessary in an effort to unravel the factors associated with poor academic achievement among secondary school students. The current study examined the extent to which self-efficacy predicts academic achievement of secondary school students.

1.3 Statement of the Problem

This study sought to address the problem of dismal academic achievement among secondary school students in Kiambu Sub County. In the year 2016, 1612 candidates (64%) out of 2519 scored D plus and below and in the year 2017 the number increased to 68%. The large number of secondary school learners who have been performing below average in KCSE examination poses a great danger to economic development in the sub county and the country in general as most of these students miss out opportunities in higher education and employment. The poor achievement means the education system produces majority of the citizens who are less empowered to spur economic development.

Many educational researchers in Kenya have conducted studies on psychological constructs that influence academic achievement in many parts of the country (Wawire, 2010; Kwena, 2007; Mutweleli, 2014; Mwangi, 2015). The psychological constructs studied include; academic self handcapping, resilience, achievement motivation but these constructs are context specific and Kiambu sub-county has received little attention as far as the studies are concerned. Therefore, there was need for this research on the factors related to academic achievement to inform policy makers and education stakeholders on what needs to be done to improve the quality of academic achievement to drive economic development towards the realization of the Big Four Agenda and

vision 2030. From the background to the study, it is evident that emotional intelligence and self-efficacy beliefs are important variables associated with academic achievement.

1.4 Purpose of the Study

The main purpose of this study was to investigate the extent to which emotional intelligence and academic self- efficacy beliefs predict academic achievement among secondary school students in an effort to unearth the factors associated with below average performance in most secondary schools in Kiambu sub county.

1.5 Research Objectives

The researcher intended to achieve the following objectives:

- i. To find out the relationship between emotional intelligence and academic achievement of students.
- ii. To examine the relationship between academic self- efficacy beliefs and academic achievement of students.
- iii. To develop a prediction equation of academic achievement from emotional intelligence and academic self-efficacy beliefs.

1.6 Research Hypotheses

- i. There is a significant relationship between emotional intelligence and academic achievement of students.
- ii. There is a significant relationship between academic self-efficacy beliefs and academic achievement of students.
- iii. There is a significant prediction equation of academic achievement from emotional intelligence and academic self- efficacy beliefs.

1.7 Significance of the Study

The findings of this study may be of benefit to the teachers as it may provide useful information regarding the influence of student related factors on academic achievement. The information may be used to enhance teaching methods and mentor the students on emotional intelligence and academic self efficacy beliefs for better . The findings may be used to address the perennial below average performance in national examinations. Parents may use the findings of this study to guide their children to improve learning outcomes. This information may be used to promote emotional intelligence among learners in secondary schools in Kiambu Sub-county. The students may also find the results useful on the personal factors that influence academic achievement. Future researchers may use the findings to come up with relevant studies to create new knowledge in the area.

1.8 Limitations and Delimitations of the study

1.8.1 Limitations of the Study

The study was carried out in eleven public secondary schools in Kiambu sub-County. The results of this study may be generalized but with caution because the factors that predict academic achievement in other secondary schools in Kenya are context specific. The researcher used self reports to collect data. This technique is prone to biased responses but the researcher took precaution by explaining to the respondents in details the purpose of the study to increase the validity and reliability of the results.

1.8. 2 Delimitations of the Study

The study was restricted to eleven public secondary schools in Kiambu sub-county and as such the results only reflect emotional intelligence and self-efficacy beliefs as predictors of academic achievement in this sub county and not the rest of the country. The study did not investigate the factors that influence emotional regulation strategies and academic self-efficacy beliefs and the benefits associated with the variables.

1.9 Theoretical and Conceptual Framework

1.9.1 Theoretical Framework

The study was guided by two theories namely; social cognitive theory and emotional intelligence theory. The two theories are interrelated in the sense that social cognitive theory avers that student's academic self-efficacy belief is a product of personal factors such as emotional intelligence and environmental factors and emotional intelligence theory provides an explanation on the effect of emotions on cognitive and affect processes of the students.

a. Social Cognitive Theory (Bandura, 1986)

Bandura (1986) proposed social cognitive theory of self-regulation that says individuals do not simply respond to environmental influences, but rather they actively seek and interpret information. In view of Bandura's theory, a person's behavior is not only determined by personal processes but it is also determined by environmental and behavioral patterns influencing each other. Therefore, how a student reacts to an educational problem is assumed to be determined not only by perceptions of self-efficacy but also by environmental factors such as the level of school discipline, school

performance and background. Self-efficacy beliefs emerged with the social learning theory that was developed by Bandura in 1982. Self efficacy refers to an individual's judgments regarding how well one acts in dealing with possible conditions (Bandura, 1982). Academic self-efficacy belief is the extent to which a person feels himself or herself capable of finishing the learning tasks successfully.

Bandura (1997) defined self-efficacy as an individual's belief in self ability to successfully accomplish a task. Self-efficacy determines how well an individual can be able to achieve a goal or a task. Self-efficacy is a sub-set of Bandura's social cognitive theory which asserts that human behavior is based on observational learning. Bandura argues that social environment plays a pivotal role in determining behavior.

Social cognitive theory contemplates that self-efficacy is developed from external experiences and self perception and it is very key in determining how an individual reacts to situations and his/her achievement (outcomes). Students are proactive in their learning environment and they contribute to their own behavior within a network in a reciprocal fashion (Bandura, 1999). The theory also asserts that a student's academic self-efficacy is assumed to depend on learning experiences and level of development. Learners' goals, drive levels, scholastic performance affect their sufficiency beliefs in education and getting better academic grades (Schunk, 2009). Therefore, it is expected that older and experienced students should be better equipped in self-efficacy beliefs.

Studies done indicate that learners with better self-efficacy beliefs perform better in academics than learners with low self-efficacy beliefs. Based on the social cognitive theory of Bandura, student's level of self-efficacy beliefs determines the quality of

academic grades. Thus, the higher the academic self-efficacy beliefs the better the academic outcomes and vice versa. The theory is preferred in this study because it assumes that a student's academic self-efficacy belief is a product of personal, environmental and behavioral factors. This formed a basis to examine the relationship between academic self efficacy beliefs and academic achievement among form four students in Kiambu County.

b. Emotional Intelligence Theory (Salovey & Mayer, 1997)

Emotional intelligence theory is based on the area of cognitive processes, affect and how emotions affect these processes. During the development of this theory, it was thought that emotion had detrimental effect on behavior but later it was considered to be adaptive to thinking process and could complement each other. The theorists suggested that emotional intelligence was connected to all achievements in life. Emotional intelligence was viewed as a separate cognitive entity but also associated with the general intelligence of an individual. The theorists argued that emotional intelligence consists of certain emotional and social skills, competencies and facilitators categorized into five areas namely; Self-awareness, emotional management, self-motivation, empathy and nterpersonal skills.

Emotional intelligence has gained popularity in positive psychology in the recent past and empirical evidence has demonstrated that it is associated with academic achievement and decreased aggressive behavior (Muris, 2001). Most of the studies grounded in emotional intelligence theory were conducted in the medical field. For instance, Bar-On and Parker (2000) demonstrated that patients who suffered brain

damage to certain areas associated with emotional signaling lost interpersonal and intrapersonal skills. The patients were found to have difficulties in social functioning but their cognitive intelligence was normal. Based on this theory, the researcher investigated how social functioning was associated with academic achievement of secondary school students

1.9.2 Conceptual Framework

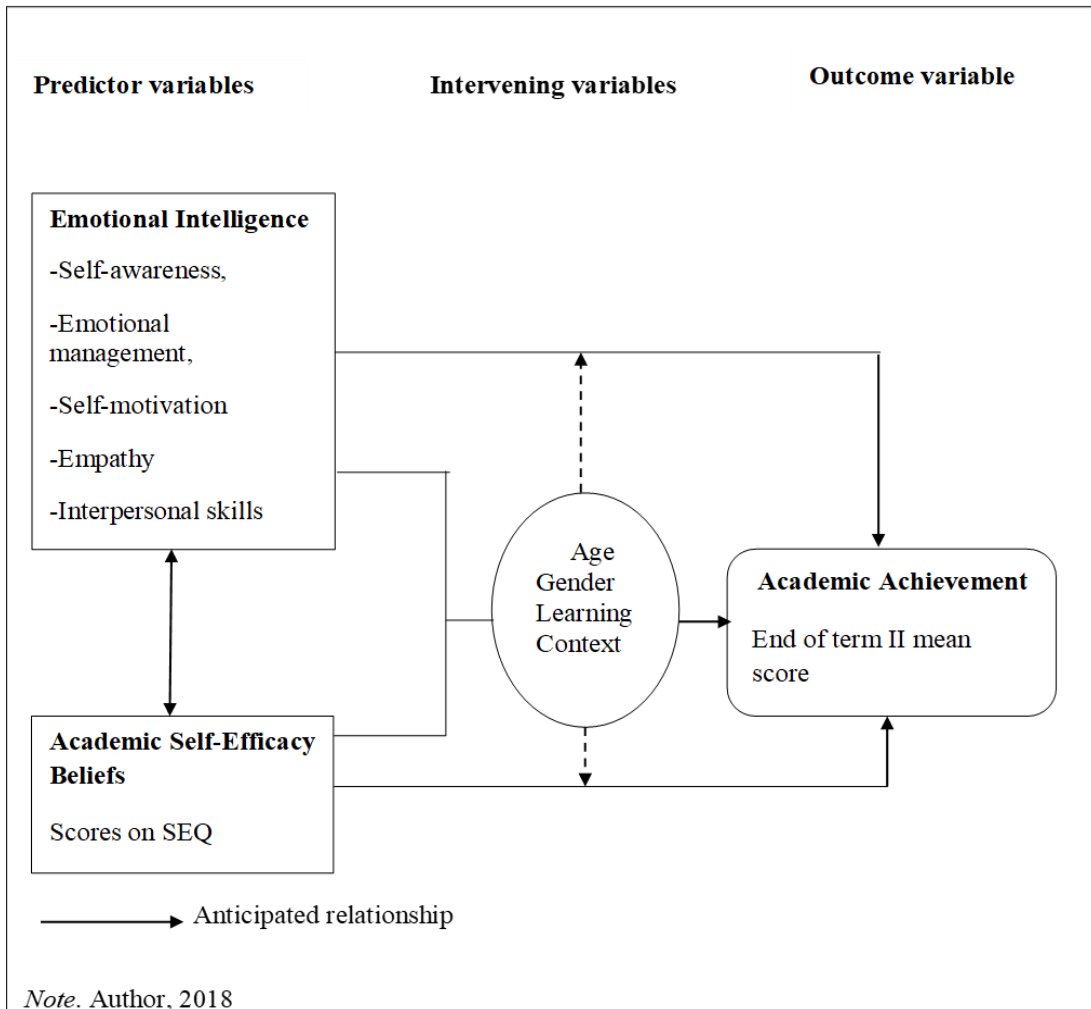


Figure 1.1 Model for the relationships between predictor and outcome variables

Figure 1.1 illustrates the relationship between emotional intelligence, academic self-efficacy beliefs and academic achievement. Emotional intelligence and academic self-efficacy beliefs were the predictor variables. It was conceptualized that emotional intelligence and academic self-efficacy beliefs influence academic achievement of students. Emotional intelligence was measured at five levels namely, emotional management, self-awareness, empathy, self-motivation and interpersonal skills using

adapted scale developed by Singh (2004). Self efficacy was measured using scores on Self-Efficacy Questionnaire for adolescents (SEQ) developed by Muris (2001). Academic achievement was the outcome variable. It was measured using end of term II mean score in the year 2019. The mean scores were converted into T- scores to make them comparable. The intervening variables were age, gender and learning context. These variables were not of interest to the researcher but might have influenced the relationship between predictor variables and the outcome variable.

1. 10 Operational Definition of Terms

Academic achievement	The end of term examination grade points converted into T- Score
Academic Self-efficacy belief	It was the score on SEQ which indicated the extent to which a student felt himself or herself capable of in completing the academic tasks successfully
Emotional intelligence	Is the score on emotional intelligence scale which indicated the extent to which a student was able to identify and manage his/her emotions and those of others, sense of self awareness, interpersonal skills and empathy
Emotional management	It refers to the student's score on emotional management sub scale regarding managing one's emotions
Empathy	The student's score on empathy sub scale concerning the extent to which the student is able to understand the feelings of others
Interpersonal skills	The student's score on interpersonal skills sub scale regarding the extent to which the student is able to positively relate with others

Poor academic achievement	It referred to any average performance in the standardized T- score below 40%.
Predictor Variables	Emotional intelligence and academic self-efficacy variables which were used to tell the value of academic achievement
Self-awareness	This was the student's score on self-awareness sub scale on the level of understanding of one's emotions
Self-motivation	It is the student's score on self-motivation sub scale concerning the extent to which the student is self-motivated

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

This chapter presents the review of the literature related to this study. The relationship between emotional intelligence, self-efficacy and academic achievement is reviewed. The chapter ends with summary of literature review and gap identification.

2.2 Relationship between Emotional Intelligence and Academic Achievement

The association between emotional intellect and scholastic achievement has been an area of interest for many educational researchers. Motivated by the intellectual curiosity on the influence of emotional intelligence on academic achievement, Maraichelvi and Rajan (2013) carried out a study among 300 undergraduate final year students in India. The students were randomly sampled and then questionnaires administered to collect data. The correlational study examined four specified domains of emotional intelligence namely interpersonal consciousness, intrapersonal consciousness, intrapersonal management and interpersonal management and the findings indicated that all the domains were positively correlated to academic achievement. However, the study did not report the extent to which the domains of emotional intelligence predicted academic achievement. The study also used a sample of university students and therefore prompting the need to involve high school students from Kiambu Sub County to investigate the extent to which the domains of emotional intelligence predict academic achievement.

In a related study, Yahaya et al. (2011) in their investigation examined the relationship between each of the five dimensions of emotional intelligence namely self-awareness, emotional management, self-motivation, empathy and interpersonal skills and academic achievement. The survey study was conducted among secondary school students in Malaysia who were randomly sampled to fill the questionnaires. The Pearson correlation and regression analyses results revealed that there was a significant positive relationship between self-awareness ($r = .21$), emotional management ($r = .21$) and empathy ($r = .21$) at the level of $p < .05$ with academic achievement. Multiple regression analysis (stepwise) results showed that only three dimensions of emotional intelligence which are self-awareness ($\beta = 0.261$), self-motivation ($\beta = -0.182$) and empathy ($\beta = 0.167$) accounted for 8.7% of variation in criterion (academic achievement) variable. It was unclear how the intervening variables; age and gender which have been found to influence emotional intelligence were statistically handled. The current study statistically controlled the intervening variables and then examined how emotional intelligence predicted academic achievement of students in a developing country.

A study by Roy (2013) examined the association between emotional intelligence and academic achievement motivation of learners in secondary schools in India. The study randomly sampled 105 students (48 boys and 57 girls) who completed the emotional intelligence achievement motivation scales. The collected data were analyzed using Pearson correlation and the results showed that emotional intelligence, motivation and academic achievement were significantly related. The study also revealed that students with different levels of academic achievement motivations namely high, average and

low differ from one another on emotional intelligence. The study did not report on the extent to which emotional intelligence predicted academic achievement. Roy also used a sample from a context in Asia. To address these gaps, the present study investigated the prediction of academic achievement from emotional intelligence using a sample of students from African context, Kenya.

In the United States of America, Chamundeswari (2013) sought to investigate the relationship between emotional regulation and scholastic performance of students in secondary schools. The study used random sampling technique to obtain 321 students from different education systems namely state, central board and matriculation schools. The researcher used EI questionnaires and grade point average (GPA) to collect data. The Pearson correlation analysis results obtained indicate a positive significant relationship between emotional regulation skills and academic outcomes. The study also reported that students from different schools (private and state owned) had different levels of emotional intelligence with those from private schools reported to have higher emotional intelligence than those from public schools. Even though the study found emotional intelligence to have a significant positive relationship with academic achievement, it did not pay attention to the specific domains of emotional intelligence and investigate how each one of them predicted academic achievement. The current study therefore, sought to explore the association between the domains of emotional intelligence and academic achievement and came up with a prediction equation.

In Europe studies have also been conducted to establish to what extent emotional intelligence predicts academic achievement. Mestre (2006) did a study in Spain among 127 adolescents sampled from secondary schools to investigate the ability to understand and manage emotions and its influence on academic achievement. The study was quantitative in nature as it collected data using questionnaires. The nature of the relationship was examined using Pearson correlation coefficient which revealed that the two variables correlated positively. Mestre used a sample of students from Europe and in his study, specific focus on the domains of emotional intelligence was not given attention. The current study used a sample of students from Africa, Kenya in particular and investigated how each of the domains of emotional intelligence predicted academic achievement.

A related study involving college students was conducted by Yunus et al. (2014) in South Korea to investigate the relationship between students learning through part time and full time programs and students' emotional intelligence, psychological well-being and life satisfaction. The survey study involved 262 students who completed the questionnaires. The data were analyzed using independent samples t-test. The study reported that students learning through part time program differed significantly in emotional intelligence from those learning through full time program. The study did not however report the relationship between emotional intelligence and academic achievement.

Leslie (2007) designed a study to investigate the relationship between emotional intelligence and the academic achievement of at-risk students. The study used a sample of 300 students categorized into regular and at risk. The Mayor Salovey Caruso Emotional Intelligence Test (MSCEIT) was used to collect data. The Pearson correlation analysis results revealed that there was a correlation between emotional intelligence and the academic achievement of at-risk students. The study also established that there was a relationship between the academic achievement of at-risk students and emotional intelligence. The study was conducted in a developed country prompting for a study in a developing country to establish if such a relationship exists in a different context.

Contradictory findings on the relationship between emotional intellect and academic achievement have also been reported. Bell and Bradshaw (2008) investigated the relationship between emotional intelligence and learning outcomes among college students. A total of 60 students were randomly sampled to complete the questionnaires. The quantitative findings showed that there was no significant correlation between college students' emotional intelligence and academic achievement. The mixed results elicit a scientific debate on the prediction of academic achievement from emotional intelligence hence the necessity for this study.

In the African context, a number of studies have been done and according to the literature reviewed emotional intelligence was reported to have a significant positive correlation with academic achievement. Ogundokun and Adeyemo (2010) designed a study in Nigeria to investigate the influence of emotional intelligence and academic

motivation on learning outcomes of students in secondary schools. The study used descriptive survey research design using a sample of 1563 students (826 male and 737 female) between the ages of 12 and 17 years. Descriptive statistics were used to analyze data. Ogundokun and Adeyemo established that emotional intelligence, academic motivation and age predicted academic achievement with a significant positive correlation ($r = .736$). However, the study did not report on how the specific domains of emotional intellect namely; self-consciousness, self-motivation, emotional management, empathy and interpersonal skills predict academic outcomes, a concern this study sought to address. In Kenya, there is a scarcity of documented literature on the correlation between emotional intelligence and academic achievement, a gap the current study intended to fill.

2.3 Relationship between Academic Self-efficacy beliefs and Academic Achievement

According to the literature reviewed, most of the studies done on the correlation between academic self-efficacy and academic outcomes were conducted in developed countries. Li (2012) conducted a research in Hong Kong on the relationship between students' self- efficacy and academic achievement. A sample of 153 students was involved to complete self-administered questionnaires. Multiple regression analysis results revealed that both self-efficacy and attitude were significantly related to effort. However, the multiple regression analysis of attitude, self- efficacy and effort failed to predict academic achievement. The study used a sample of university students and did not report on the prediction power of self-efficacy alone on academic achievement. The

current study used a sample of secondary school students to establish the prediction power of self-efficacy on academic achievement.

Carrol, et al. (2009) carried out a research to examine the relationship between self-efficacy and academic achievement among secondary school students. The study sampled 935 students aged 11 to 18 years from ten schools to complete children's self efficacy scale. The data collected were subjected to structural equation modeling to test for the relationships. Self- efficacy was reported to be significantly associated with academic achievement. The study was done in a cultural context different from the one in Kenya and therefore the need for the current study which examined the relationship between academic self-efficacy and academic achievement in Kenya, Kiambu sub-county.

In another study, Yazini, Seyis and Altum (2011) explored the influence of academic self-efficacy beliefs on academic achievement of secondary school students in Europe. The study used a sample of 407 students (236 female and 171 male) to complete self-efficacy beliefs scale. Regression analysis results indicated that a self-efficacy belief is a significant predictor of academic achievement. However, the results of the study were based on a sample of European students which limit the generalization of the results. The current study used a sample of African students from Kenya, Kiambu sub-county to compare the results.

Regionally, Tenaw (2013) investigated the link between self-efficacy and academic performance among college students taking analytical chemistry course in Ethiopia. To collect data, the researcher sampled 100 students to complete the self-efficacy scale. Data analysis using Pearson correlation indicated that self-efficacy beliefs significantly correlated with academic achievement ($r = 0.385, p < 0.01$). The findings were based on a sample of college students and therefore there is need to use a sample of secondary school students to compare the results. The current study seeks to explore the effects of emotional intelligence and academic self-efficacy beliefs on academic performance among secondary school students.

In Kenya, a considerable number of studies have been conducted to investigate the relationship between academic self-efficacy beliefs and academic performance. Aurah (2013) conducted a study to investigate the effects of self-efficacy beliefs and metacognition on academic achievement among students. The study sample constituted of 2138 form four students who were randomly sampled to provide quantitative data using self-efficacy questionnaire (SEQ). Qualitative data that were collected using in-depth interviews were thematically analyzed to corroborate quantitative data. Descriptive and inferential statistics (hierarchical linear regression and factorial ANOVA) were used to analyze quantitative data and the results indicated that self-efficacy was a strong predictor of academic achievement. The results also revealed that highly self-efficacious students performed better in achievement tests than lowly self-efficacious students. The study was done in Western Kenya and the current study was carried out in central Kenya to compare the findings.

In Kisumu County, Ochieng' (2015) conducted a study to examine the relationship between self-efficacy beliefs and academic achievement of students in Mathematics. The study was done in Nyakach Sub-County using a sample of 390 students. Using descriptive research design the researcher established that self-efficacy beliefs predicted Mathematics performance. Ochieng' recommended that a similar study to investigate how self-efficacy beliefs predicts overall academic achievement was necessary, a concern the current study sought to address.

In a related study, Moturi (2012) investigated the association between academic self-efficacy and academic performance in English and Mathematics among students in Nyamira County. The study employed quantitative and qualitative research techniques using a random sample of 240 students. Self-efficacy questionnaire whose reliability coefficient was determined at 0.76 was used to collect data from the sampled students. Descriptive and inferential statistics (Pearson product moment correlation, one-way ANOVA and *t*-test were used to analyze the data). The study reported that there was no significant relationship between academic self-efficacy and academic achievement, $r = -.030$, $P > .05$. However, study evidence indicated that there was a low positive relationship between academic self-efficacy and mathematics achievement. The results of this study were contradictory to earlier findings. Due to the mixed findings, the current study was conducted in Kiambu sub County to corroborate the findings.

2.4 Prediction of Academic Achievement from Emotional Intelligence and Academic Self Efficacy

The prediction of academic achievement from emotional intelligence and academic self-efficacy studied together has not been explored. However, studies on how each of the variables predict academic achievement have been conducted.

2.4.1 Emotional Intelligence as a Predictor of Academic Achievement

Literature reviewed on emotional intelligence as predictor of academic achievement present mixed results. Shipley, Jackson and Segrest (2017) investigated emotional intelligence as a predictor of academic achievement among college students. The study adopted descriptive survey research design with a sample of 193 college students. Trait emotional intelligence scale was used to collect data on emotional intelligence while academic achievement was measured using self reported GPA. The results showed that global emotional intelligence did not significantly predict academic achievement.

In another study, Babelan and Moenikia (2010) explored the predictive index of emotional intelligence on academic achievement among students who were enrolled in distance education in Iran. multistage sampling technique was used to select 328 students. Academic achievement mean score was used to measure academic success while emotional intelligence inventory was used to collect data on the students' emotional intelligence skills. Multiple regression was used to analyze the data and the results showed that there was a significant predictive relationship between the diemnsions of emotional intelligence, global emotional intelligence and academic achievement. The emotional intelligence domains that predicted academic achievement include;

interpersonal relationship, social awareness, self-motivation self-expression and self-awareness

In India, Marachelvi and Rajan (2013) studied how emotional intelligence predicted academic achievement of college students. The sample consisted of three hundred female students who were taking psychology. Emotional intelligence quotient was measured using emotional intelligence questionnaire. The results showed that emotional intelligence significantly predicts academic achievement. Yazici, Seyis and Altun (2011) also observed that emotional awareness was a significant predictor of academic achievement. The study established that those students who had higher scores in emotional awareness scored highly in academic achievement.

Yazici, Seyis and Altun(2011) conducted a study among secondary school students and the results showed that the domains of emotional intelligence predicted academic achievement of the students. The domains that were found to be significant predictors of academic achievement include; interpersonal relationships, ability to manage stress and adaptability. The students who had high scores in the domains of emotional intelligence scored highly in academic achievement. Interpersonal relationships domain was found to have the highest predictive power ($r = .46, p = .00$) compared to the rest of the domains.

A study by Amalu (2018) investigated the prediction of academic achievement from emotional intelligence among high school students in Nigeria. The descriptive study

used a sample of 375 students. The sampled students completed emotional intelligence questionnaire and mathematics test. Two statistical approaches; descriptive and inferential statistics were used to analyze data. The findings showed that emotional intelligence significantly predicted mathematics achievement. All the domains of emotional intelligence were also found to significantly predict mathematics achievement. The levels of emotional intelligence include; emotional management, self-awareness, self motivation, social skills and empathy. Similar findings were reported by Chew, Zain and Hassan (2013) in a study that was conducted among college students. The results show that regardless of the level of education, emotional intelligence is a potent predictor of academic achievement.

2.4.2 Academic Self-efficacy as a Predictor of Academic Achievement

Research conducted in different countries using samples of students drawn from different levels of education indicate that self-efficacy predicts academic achievement. In Iran, Motlagh, Amrai, Yazdani, Abderahim and Sourie (2011) studied self-efficacy as a predictor of academic achievement. Multistage sampling technique was used to select 250 students. Academic achievement was measured using grade point average and self-efficacy questionnaire was used to measure self-efficacy of the students. Correlation and regression analyses were used to establish the nature of the relationship between the variables.

The results showed that self-efficacy accounted for 10% variance in academic achievement. It was also established that self-efficacy significantly predicted academic achievement.

Another research by Betoret, Rosello and Artiga (2017) explored the predictive power of self-efficacy on academic achievement. The study sample comprised of 797 secondary school students. Self-efficacy questionnaire was administered to the sampled students. Academic achievement of the students was measured at the end of the term. Structural equations modelling was used to analyze the data and the results showed that self-efficacy predicted academic achievement.

A study by Hassan, Alasmari and Ahmed (2015) investigated self-efficacy as a predictor of academic achievement among university students. A total of 100 students were randomly selected to form a study group. The respondents completed self-constructed questionnaires and the data obtained was analyzed using descriptive statistics. The results showed that self-efficacy predicted academic achievement by about 21%. These findings were attributed to the fact that students with high academic self-efficacy attribute success to their ability and effort.

Locally, Oyuga, Raburu and Aloka (2019) conducted a research to investigate the predictive relationship between self-efficacy and academic achievement among secondary school students in Kenya. The research was anchored on social cognitive theory. The sample consisted of 11 principals of secondary schools and 300 students. Data collection techniques that were used include; questionnaires, interview guides and document analysis. The data that was collected were subjected to regression analysis and the findings revealed that there was a weak predictive relationship between academic self-efficacy and academic achievement ($r = .276$).

2.5 Summary of Literature Review and Gap Identification

The literature reviewed reveal mixed findings on the association between emotional intelligence, academic self-efficacy and academic achievement. A considerable body of knowledge indicates that the domains of emotional intelligence are positively related to academic achievement. Other studies have also established that there is no significant relationship between emotional intelligence and academic achievement. These mixed findings and considering that most of the studies used college students drawn from western and Asian cultures, necessitated the current study to contribute to documented literature on the influence of emotions on academic achievement.

Concerning the relationship between self-efficacy and academic achievement, some studies reported a significant relationship while others reported that there was no significant relationship. Furthermore, most of the studies used samples from developed countries and the findings were inconclusive. The local studies had inconsistencies regarding locale and the different types of self-efficacy beliefs examined which limit generalization of the results prompting the need for this study in Kiambu sub County.

Little has been done on emotional intelligence and self-efficacy studied together to predict academic achievement. However, a number of studies on the prediction of academic achievement from each of the variables have been done. Literature reviewed on emotional intelligence as a predictor of academic achievement presented contradictory results. Some of the studies used samples of university students and therefore there was need for the current study to fill the gaps. Self-efficacy was found to be a significant predictor of academic achievement. But there was need for this study

to investigate how the two variables predict academic achievement when studied together.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This chapter presents the research design that was used, the variables, target population, sample size, the research instruments that were used, data collection procedures, location of the study, logistical and ethical considerations.

3.2 Research Design

This study adopted correlational research design in investigating the relationship between emotional intelligence, academic self-efficacy beliefs and academic achievement among form four students in public secondary schools in Kiambu Sub-County. Correlational technique is used where conditions or relationships exist, opinions are held, processes are ongoing and effects that are evident or trends that are developing (Mugenda & Mugenda, 2003). This design is used when the aim of the study is to explore how the research variables are related without any manipulation. This design was successfully used by Mutweleli (2014) in a study carried out in Nairobi County among secondary school students. Therefore, it was considered a robust research design to be used to answer the research questions and test the hypotheses. Correlational research design was appropriate because data were collected to establish the link between emotional intelligence, academic self-efficacy beliefs and academic achievement.

3.3 Research Variables

The predictor variables of this study were scores on emotional intelligence and academic self- efficacy beliefs. Emotional intelligence was measured at five levels namely; empathy, emotional management, interpersonal skills, self- awareness and self- motivation. The outcome variable was academic achievement scores. Academic achievement was measured using end of term scores which was converted into T- scores. The intervening variables were age, gender and the learning context. The relationship between emotional intelligence, academic self-efficacy and academic achievement might have been affected by the gender of the student, age and the quality of learning context. However, this was statistically controlled during data analysis.

3.4 Location of the Study

The study was carried out in Kiambu Sub-County, Kiambu County, Kenya. In Kiambu Sub-County, records from the sub-county education office indicated that majority of the students especially from public secondary schools were performing dismally in KCSE. Ruinge (2015) notes that below average performance in secondary schools in Kiambu County has been an issue of concern and the research findings to address the problem are inconclusive. Mwangi (2015) also shares the same sentiments and recommends that students should be supported to adopt education paradigm that focuses on strengths and success to enhance academic achievement. Informed by these studies, this study investigated the relationship between academic self-efficacy beliefs and emotional intelligence and academic achievement in an effort to unravel the causes of low academic achievement.

3.5 Target Population

This study targeted 3263 form four students in 43 public secondary schools in Kiambu Sub-County in the year 2019.

Table 3. 1

Form Four Enrolment in Secondary Schools in the year 2019 in Kiambu Sub-County

School type	No. of schools	Student enrolment
Girls' boarding schools	8	976
Boys' boarding	11	485
Co-educational schools	24	1802
Total	43	3263

Source. Sub-county education office (2019)

Data in Table 3.1 indicates that there were 8 girls' boarding schools with a population of 976 students. The boys' boarding schools were 11 with an enrollment of 485 students. Co-educational schools were 24 with a total population of 1802 students.

3.6 Sampling Techniques and Sample Size

3. 6 .1 Sampling Techniques

This study used two types of sampling procedures namely; proportionate sampling and simple random sampling. Proportionate sampling was used to select public secondary schools to participate in the study. This is because public secondary schools were the most affected with poor academic achievement (Ruinge, 2015). The students who participated in the study were selected using simple random sampling. The students were sampled from form four. Form four students were used in this study because they

were the ones to sit for KCSE and were deemed to be relatively mature cognitively and emotionally to provide reliable information on emotional intelligence and academic self efficacy beliefs.

3.6.2 Sample Size Determination

Proportionate sampling was used to select 11 public secondary schools from which 390 form four students were selected. The sample was drawn from form four students in public secondary schools. The sample size of the schools was 25% while that of the students was 12% of the target population which was appropriate because Mugenda and Mugenda (2003) recommend a sample size of 10- 20%.

Table 3. 2

Sample Size and Sampling Frame

School type	Sample size	No. of Students to be sampled
Girls boarding	2	72
Boys boarding	3	108
Mixed public Day school	6	210
Total	11	390

Source. Researcher (2019)

As indicated in Table 3.2, two girls' boarding schools were sampled and a sample of 72 girls was obtained from the two schools. From each of the girls' schools, 36 respondents were selected. Three boys' boarding schools were involved in the study. The sample of students obtained from boys' boarding schools was 108. The mixed public day secondary schools that were involved in the study were six with a student sample of 210 students.

3.7 Construction of Research Instruments

This study used two research instruments namely; questionnaires and mark sheets.

a. Questionnaire

The questionnaire had three sections. Section one gathered demographic data (gender and age) of the respondents. Section two collected data on emotional intelligence and section three collected information on self-efficacy. Free for use Self-Efficacy Questionnaire for adolescents (SEQ) developed by Muris (2001) was adapted. It was scored by summing all the Likert scale scores in each item and the average was calculated. A score of 8-16 indicated low self-efficacy, 17-31 indicated average while 32-40 indicated high self efficacy. Emotional intelligence was measured using adapted scale developed by Singh (2004).

b. Document Analysis

Mark sheets were used to collect information on academic achievement. End of term two points and grade were transformed to T score to measure academic achievement.

3.8 Pilot Study

Pilot study was conducted in one school with similar characteristics as the schools where the actual study was carried out to test the reliability and validity of the research

instruments. The data were collected from twenty students. The students were taken through the instructions and when they indicated that they had understood the instructions, they were allowed to fill the questionnaires. The data were coded into SPSS computer programme and then analysis was done.

Some of the challenges faced during pilot study include; some of the questionnaires were incomplete but the missing values were replaced using means scores of the other items. Some students wrote wrong admission numbers making it difficult to get their end of term exam scores. The research was compelled to ask the respondents to confirm the admission numbers given. This informed the researcher to be cautious during the actual study to avoid such mistakes.

The data were collected during lunch break but the students extended the exercise into class time. About 20 minutes of the first lesson after lunch were used to complete the questionnaires. To avoid such inconvenience, during the actual study data were collected at 4 pm when the students were through with their lessons. This gave the students ample time to fill the questionnaires.

The school where the pilot study was done was not among the schools where the actual study was carried out. The findings of the pilot study were discussed with the supervisor and corrections were made on the items where necessary to improve validity and reliability.

3.8.1 Validity of the Instruments

Content validity was ascertained through expert judgment and peer review. The university supervisor read through the items in emotional intelligence scale and self-efficacy questionnaire to ensure that they measured the constructs that were under study.

Some of the items were re-organized to ensure that positive and negative items were alternating. Mugenda and Mugenda (2003) opines that content validity of a measurement tool is improved through expert judgment. As such, the researcher presented the instruments to the supervisor to ascertain content validity.

3.8.2 Reliability of the Instruments

The researcher used split half technique to establish the reliability of the questionnaire. To establish internal consistency of the questionnaire, data were split into two equal halves and then a correlation analysis was conducted.

Table 3. 3

Reliability Coefficients

Cronbach's Alpha	Part 1	Value	.74
		N of Items	14 ^a
	Part 2	Value	.68
		N of Items	14 ^b
	Total N of Items		28
Correlation Between Forms			.67
Spearman-Brown Coefficient	Equal Length		.80
	Unequal Length		.80
Guttman Split-Half Coefficient			.80

As indicated in Table 3.3, all the reliability coefficients obtained were within the acceptable range. Mugenda and Mugenda (2003) recommend that a reliability coefficient of 0.7 or more is acceptable.

3.9 Data Collection Techniques

The researcher collected data through administering of questionnaires. In each of the schools that was involved in the study, the researcher was involved in the process of collecting data. The researcher visited each of the schools the day and time agreed with

the school principal. The sampling techniques discussed in Section 3.6 were used to select the samples that were used to fill the questionnaires. The sampled students were taken to separate classrooms and then issued with questionnaires. The researcher read the instructions to the respondents and when they indicated that they had understood, they were allowed to fill the questionnaires.

The questionnaires were collected after the students had confirmed that all the questions were filled. This technique was appropriate for this study because it enabled the researcher to collect adequate information from form four students to answer research questions.

3.10 Data Analysis

The questionnaires were serialized and then checked for completeness. When the questionnaires were counted and checked, in total 16 questionnaires were not included in data analysis because some were not returned and others were discarded because they had more than 10 items not filled. The data was then coded into SPSS program for analysis. Before analysis, the researcher checked for missing values and outliers. The missing values and outliers were replaced using the mean of the other values in the item. Using SPSS, the sum of the scores on the domains of emotional intelligence was computed. To make academic achievement marks comparable, the scores were transformed into T scores. The sum of self-efficacy scores was also computed.

Frequencies and percentages were used to analyze the questionnaire return rate, gender and age of the respondents. Descriptives of the scores of academic achievement, emotional intelligence and academic self-efficacy were analyzed using the mean, standard deviation, skewness, kurtosis, range, minimum and maximum.

Inferential statistics was used to test the following hypothesis;

H₀₁ There is no significant relationship between emotional intelligence and academic achievement of students in Kiambu Sub- County. Statitital test used; Pearson correlation analysis.

H₀₂ There is no significant relationship between self-efficacy beliefs and academic achievement of students in Kiambu Sub-County. Statitital test used; Pearson correlation analysis.

H₀₃ There is no significant prediction equation of academic achievement from emotional intelligence and academic self- efficacy beliefs. Statitital test used; Regression analysis.

3. 11 Logistical and Ethical Considerations

3.11.1 Logistical Considerations

The researcher got authorization letter to conduct research from the Graduate School Kenyatta University and then an introduction letter from the Department of Educational Psychology. Then the researcher applied for a research permit from National Commission for Science, Technology and Innovation (NACOSTI). When the research permit was obtained, the researcher reported to the County Education Officer, Kiambu and then sub-county Education Officer, Kiambu Sub-county for authorization to conduct the study. The researcher booked appointments with the heads of schools where the study was conducted.

The questionnaires were photocopied and then packed in 11 envelopes as per the number of respondents that was to be selected. The budget for transport to the schools was prepared and the money was set aside for the exercise.

3.11.2 Ethical Considerations

The consent to involve the students in the study was given by the school principal and the students were also given a consent form to read and understand to make an informed decision to participate in the study by signing. The researcher explained in detail to the respondents the aim of the research. The researcher observed confidentiality of the information the respondents provided and the results are discussed in summary form without any revealing information that can be used to identify the participants.

CHAPTER FOUR

FINDINGS, INTERPRETATIONS AND DISCUSSIONS

4.1 Introduction

In this chapter, the findings, interpretation and discussion of the results are presented as per the study objectives. It starts with the background information of the respondents, results, interpretation of the results and then the discussion. The study was guided by the following objectives;

- i. To find out the relationship between emotional intelligence and academic achievement of students.
- ii. To establish the relationship between academic self- efficacy beliefs and academic achievement of students.
- iii. To establish the prediction equation of academic achievement from emotional intelligence and academic self-efficacy beliefs.

4.2 General and Background Information

This sub section presents the questionnaire return rate and information on gender and age of the respondents.

4.2.1 Questionnaire Return Rate

The sample size for this study was 390 students who were proportionately sampled from girls boarding, boys boarding and mixed public day secondary schools in Kiambu Sub County. In girls boarding schools 72 questionnaires were administered, boys boarding 108 questionnaires were administered and in mixed public day schools, 194 questionnaires were administered. The researcher administered the questionnaires in

person in girls and boys boarding schools. In public secondary schools the researcher sought assistance from the class teachers to administer the questionnaires which were then collected at a later date. When the collected questionnaires were counted, out of the 210 questionnaires that were distributed 194 were returned. In total the return rate was 96%. Therefore, data from 374 questionnaires were used for analysis as indicated in Table 4.1.

Table 4. 1

Questionnaire Return Rate

School Type	Questionnaires	Returned	%
Girls boarding	72	72	100
Boys boarding	108	108	100
Mixed public Day school	210	194	92
Total	390	374	96

Source. Researcher (2018)

Table 4.1 indicates that the return rate from girls and boys secondary schools was 100%. Out of 210 questionnaires that were distributed to mixed public day secondary schools, 194 questionnaires were returned translating to 92% return rate.

4.2.2 Demographic Information of the Respondents

The researcher used proportionate sampling to select the respondents from the three categories of the sampled secondary schools. The gender of the respondents is presented in Table 4.2.

Table 4. 2

Gender of the Respondents

	Frequency	Percent
Male	211	56.4
Female	163	43.6
Total	374	100.0

Table 4.2 shows that 211 of the respondents representing 56.4% were boys while 163 respondents (43.6) were girls. As indicated, the number of boys was slightly higher than that of girls. However, the disparity would not significantly affect the findings of this study on the basis of gender since it was marginal.

Concerning the age of the respondents, the researcher grouped them into three categories namely; 14-18 years, 19-25 years and 25 years and above. The results are presented in Table 4.3.

Table 4. 3

Age of the Respondents

Age bracket (years)	Frequency	Percent
14-18	273	73.0
19-25	101	27.0
25 and above	0	0
Total	374	100.0

As indicated in table 4.3, majority of the respondents representing 73% were aged 14-18. None of the respondents was 25 years and above while 101 respondents (27%) were aged 19-25 years. The results indicate that the respondents were within the recommended adolescent age bracket (14-20 years) for self-efficacy and emotional

intelligence questionnaires. From the findings, the respondents were almost of the same age and therefore it would not have profoundly affected academic self-efficacy, emotional intelligence and academic achievement of the respondents. Research evidence has demonstrated that emotional intelligence, academic self-efficacy and academic achievement significantly vary with age (Chen, Peng & Fang 2016; Satoru, 2018). The findings on age imply that its intervening effect did not significantly influence the results on the relationship between academic self-efficacy, emotional intelligence and academic achievement. During data analysis the influence of age and gender was statistically controlled.

4.3 The Relationship between Emotional Intelligence and Academic Achievement

The researcher intended to find out the relationship between emotional intelligence and academic achievement of form four students. Before subjecting the collected data to correlation analysis and hypothesis testing, descriptive analysis of emotional intelligence and academic achievement scores was conducted.

4.3.1 Descriptive Statistics for the Respondents' Emotional Intelligence

The scores of the students on emotional intelligence and academic achievement were analyzed to get the mean, standard deviation, skewness, kurtosis, range, minimum and maximum score. The results are presented in Table 4.4.

Table 4. 4

Descriptives of Emotional Intelligence and Academic Achievement Scores

	Emotional Intelligence
Mean	70.23
Std. Deviation	10.70
Skewness	-.34
Kurtosis	.25
Range	67.00
Minimum	27.00
Maximum	94.00

Note. N = 374

Table 4.4 indicates that the maximum emotional intelligence score was 94 and the minimum score was 27. The expected maximum score for emotional intelligence was 100 while minimum score was 20. The mean score was 70.23 with a standard deviation of 10.70. The findings indicate that on average the respondents had moderate emotional intelligence. The coefficient of skewness was -.34 which implies that emotional intelligence scores were approximately symmetric. The Kurtosis coefficient was .25 which was less than 3 implying that the distribution of the scores platykurtic.

Table 4. 5

Descriptive Statistics for the Scores on the Sub Scales of Emotional Intelligence

	SA	EM	SM	EMP	IS
N	374	374	374	374	374
Mean	9.51	13.12	14.79	25.43	7.38
Std. Deviation	2.07	3.10	3.29	4.63	1.72
Skewness	.111	-.12	-.35	-.27	-.31
Kurtosis	-.39	-.07	-.53	-.087	-.35
Minimum	3.00	4.00	4.00	10.00	2.00
Maximum	15.00	20.00	20.00	35.00	10.00

Note. SA –Self-awareness; EM- Emotional management; SM-Self motivation; EMP- Empathy; IS – Interpersonal Skills; N-Sample size

As indicated in Table 4.5, the mean score for self-awareness was 9.51 with maximum and minimum scores of 15 and 3 respectively. The mean score for emotional management was 13.12 with a maximum score of 20 and minimum score of 4. Regarding self-motivation, the mean score was 14.79 with the expected maximum and minimum score of 20 and 4 respectively. An average score of 25.43 was obtained for the seven item scale of empathy. The maximum score was 35 while the minimum was 10. The mean score of the last subscale of interpersonal skills was 7.38 with a maximum score of 10 and minimum score of 2. The kurtosis and skewness coefficients for all the subscales indicate that the distribution of the scores was approximately normal.

Table 4. 6

Respondents' Levels of Emotional Intelligence

Level of emotional intelligence	Frequency	Percentage
Low	3	0.8
Average	308	78.7
High	63	20.5
Total	374	100

The results obtained indicate that majority of the respondents (308) representing 78.7% had average level of emotional intelligence. Only 0.8% of the respondents had low level of emotional intelligence while 20.5% of them had high level of emotional intelligence. The findings imply that majority of the sampled students had average emotional skills to deal with academic issues to achieve desirable academic outcomes.

The schools that were selected to participate in this study were categorized into three namely; mixed day secondary schools, girls boarding and boys boarding and the results of emotional intelligence scores are presented in Table 4.7.

Table 4. 7

Scores of Emotional Intelligence as per the School Categories

School type	Mean score
Girls boarding	72.3
Boys boarding	70.0
Mixed public Day school	69.3

Table 4.7 shows that girls' boarding schools had the highest mean score of 72.3 followed by boys' boarding schools. Mixed day boarding schools reported the lowest mean score of emotional intelligence.

4.3.2 Descriptive Statistics for Academic Achievement Scores

On academic achievement of the respondents, the scores were converted into T score to make them comparable (See section 3.9). The descriptive statistics of the scores are presented in Table 4.8.

Table 4. 8

T–Scores of Academic Achievement of the Respondents

	N	Range	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
T Score	374	55.00	29.00	84.00	49.33	9.54	1.053	1.06

The findings presented in Table 4.8 indicate that the mean for the T-scores was 49.33 (std, deviation = 9.54). The maximum score was 84.0 while the minimum was 29.0 which gave a range of 55.0. The skewness coefficient obtained indicate that the data were normally distributed with a leptokurtic peak. The T-scores were used to classify academic achievement of the respondents as low ranging from 20-40, average from 41-60 and high 61 and above. Based on this categories, the findings are presented in Table 4.9.

Table 4. 9

Levels of Academic Achievement of the Respondents

Level of Academic Achievement	Frequency	Meam	<i>SD</i>
Low	71 (19.0%)	39.01	1.41
Average	260 (69.5%)	49.07	5.54
High	42(11.5%)	68.93	6.44
Total	374(100%)		

Note. *SD* – Standard deviation;

As indicated in Table 4.9, majority of the respondents representing 69.5% had an average score in academic achievement, 42% of the respondents had a high score and only 19% had a low score in academic achievement. The mean scores for low, average and high academic achievement were 39.01, 49.07 and 68.93 respectively.

Students with high academic achievement revealed the highest variability (*SD* = 6.44), followed by students with average scores (*SD* = 5.54) and students with low academic achievement had the least (*SD* = 1.41).

4.3.3 Hypothesis Testing

The researcher sought to find out if the relationship between emotional intelligence and academic achievement was significant or not by testing the following hypothesis;

There is no significant relationship between emotional intelligence and academic achievement of students.

To achieve this, the researcher subjected the emotional intelligence scores and the T-score for academic achievement to bivariate correlation analysis. The statistic that was used is Pearson correlation analysis and the results are presented in Table 4.10.

Table 4. 10

Correlation between Emotional Intelligence and Academic Achievement

		T
T	Pearson Correlation	1
	Sig. (2-tailed)	
	N	374
EI	Pearson Correlation	.236**
	Sig. (2-tailed)	.000
	N	374

Note. EI – emotional intelligence; T- Standardized T-score for academic achievement; N-Sample

Table 4.10 indicates that emotional intelligence of students and academic achievement were positively and significantly related ($r(374) = .236, p = .00$). Therefore, the null hypothesis was rejected and the alternative one was adopted. The findings imply that an increase in emotional intelligence results to higher academic scores. Consequently, students with high emotional intelligence are expected to have high academic achievement scores than those with low level of emotional intelligence. The findings support the results in Table 4.9 which established that academic scores of majority of the respondents were average since most of them had average level of emotional intelligence as indicated in Table 4.4.

Since emotional intelligence scores were grouped into three categories, the researcher sought to find out if there were significant mean score differences in academic

achievement. To achieve this, the researcher conducted one way ANOVA and the results are presented in Table 4.11.

Table 4. 11

One way Anova for the Differences in Academic Achievement Scores based on the levels of Emotional Intelligence

	Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	<i>Sig.</i>
Between Groups	650.00	2	325.00	3.62	.03
Within Groups	33267.22	371	89.67		
Total	33917.22	373			

Note. *df*- degree of freedom; *F*-critical value of F; *Sig.*-significance

As revealed in Table 4.11, there were significant mean differences in the academic achievement scores of the students with different levels of emotional intelligence ($F(2, 371) = 3.62, p < .05$). The results corroborate the findings in Table 4.10 which revealed that emotional intelligence of students was associated with their academic scores. Therefore, it was expected that students with high levels of emotional intelligence should perform better in academics than those with low level of emotional intelligence. The researcher conducted a post hoc analysis using Tukey's Honestly Significant Difference to find out which category of emotional intelligence was responsible for the significant mean differences in academic achievement. The findings are presented in Table 4.12.

Table 4. 12

Results of Post Hoc Analysis for Academic Achievement scores across the levels of Emotional Intelligence

(I) Levels of EI Score	(J) Levels of EI score	Mean Difference (I-J)	Std. Error	Sig.
Low	Average	-3.75	5.60	.78
	High	-6.93	5.49	.42
Average	Low	3.75	5.60	.78
	High	-3.18*	1.31	.04
High	Low	6.93	5.49	.42
	Average	3.18*	1.31	.04

The results in Table 4.12 indicate that there was a significant mean difference in academic achievement score for students with average emotional intelligence and high emotional intelligence. There was no significant mean difference in academic achievement scores for students with low-average and low-high levels of emotional intelligence.

4.3.4 Discussion of the Findings

The results that emotional intelligence and academic achievement are significantly related support some of the literature reviewed in chapter two. Consistent results for the relationship between emotional intelligence and academic achievement have been reported for samples of secondary school students, college students and university students. Yahaya *et al.* (2011) reported that the five domains of emotional intelligence namely self-awareness, emotional management, self-motivation, empathy and interpersonal skills were significantly related to academic achievement. In the study, self- awareness, self-motivation and empathy accounted for the greatest variation in academic achievement.

Similar results were obtained by Roy (2013) in India using a sample of secondary school students. The researcher established that different levels of emotional intelligence predicted different levels of academic motivation and academic achievement. The positive relationship may be attributed to the fact that when students are able to recognize their emotions and those of others, they are able to exercise self-control and maneuver successfully through academic challenges. As a result the students will be able to develop academic competencies for better learning outcomes. From the Pearson product moment correlation coefficient obtained, an increase in a unit of emotional intelligence led to an increase in academic achievement score by 0.236.

The findings of the study also corroborate the results of studies that used a sample of secondary school students. A study carried out by Maraichelvi and Rajan (2013) among university students reported that all the domains of emotional intelligence were significantly related to academic achievement. Yunus et al. (2014) also found similar results among college students in South Korea. However, contradictory findings on the relationship between emotional intellect and academic performance have also been reported. Bell and Bradshaw (2008) found that emotional intelligence was not significantly related to academic achievement. But the findings may be attributed to the small sample of 60 students that was used. The findings imply that the problem of below average academic achievement scores in KCSE among majority of the students may be attributed to their level of emotional intelligence. Even though the results indicated that majority of the students involved in the study scored averagely in

academic achievement, the performance is likely to be below when students sit national exams because they are standardized tests. Therefore, the problem this study sought to address is associated with the emotional intelligence of the students.

4.4 Relationship between Academic Self- efficacy beliefs and Academic Achievement

This section presents the descriptive statistics for academic self-efficacy beliefs and then hypothesis testing.

4.4.1 Descriptive statistics for Academic Self-efficacy Scores

The second objective of this study was to find out the relationship between academic efficacy and academic achievement of the students. Before testing the hypothesis, descriptive statistics for academic self-efficacy scores were obtained and the results are presented in Table 4.13.

Table 4. 13

Descriptive statistics for Academic Self-efficacy scores

	Academic self-efficacy
N	374
Mean	26.52
Std. Deviation	5.05
Skewness	-.19
Kurtosis	.42
Range	32.00
Minimum	8.00
Maximum	40.00

Table 4.13 indicates that the mean for academic self-efficacy scores was 26.52 (Std. dev. = 5.05). The maximum score was 40 while the minimum was 8 with a range of 32.

In the scale used, the expected maximum and minimum scores were 40 and 8 respectively.

The skewness coefficient of -.19 and kurtosis coefficient of .42 indicate that academic self-efficacy scores were near a normal distribution.

Table 4. 14

Respondents' Levels of Academic Self-efficacy

Level of academic self-efficacy	Frequency	Percentage
Low	8	2.1
Average	298	79.7
High	68	18.2
Total	374	100

As Table 4.14 indicates, 79.7% of the respondents had average score in academic self-efficacy beliefs. Only 8% of the students reported low level of academic self-efficacy beliefs while 18.2% had high academic self-efficacy beliefs. From the findings, majority of the students who were involved in the study had their academic self-efficacy beliefs ranging between average and high.

The researcher also sought to find out how the students from the three different categories of schools scored in their academic self-efficacy beliefs and the results are presented in Table 4.15.

Table 4. 15

Scores of Academic Self-efficacy as per the School Categories

School type	Mean score
Girls boarding	27.78
Boys boarding	26.44
Mixed public Day school	25.8

The findings presented in Table 4.15 indicate that girls boarding schools were leading in academic self-efficacy beliefs score with a mean of 27.78, followed by boys' boarding schools with a mean score of 26.44 and mixed public day schools had the lowest mean of 25.8.

4.4.2 Hypothesis Testing

The descriptive statistics for academic achievement having been discussed in section 4.3.3, the researcher conducted Pearson product moment correlation analysis to establish the nature of the relationship between the two variables. The results are presented in Table 4.16.

Table 4. 16

Correlation between Students' Academic Self-efficacy beliefs and Academic Achievement

		T Score
ASE	Pearson Correlation	.23**
	Sig. (2-tailed)	.00
	N	374
T Score	Pearson Correlation	1
	Sig. (2-tailed)	
	N	374

Note. ASE-Academic self-efficacy; T Score- Standardized score for academic achievement; N-Sample size

The researcher set out to test the hypothesis that there is no significant relationship between academic self-efficacy beliefs and academic achievement. From the results presented in Table 4.16, it was established that there was a significant positive correlation between academic self-efficacy beliefs and academic achievement ($r(374) = .23, p < .05$). Therefore, the null hypothesis was rejected. The results imply that the higher the academic self-efficacy beliefs of students, the higher the academic achievement and vice versa.

Academic self-efficacy scores of the students were categorized into three levels namely; low, average and high and as such, the researcher sought to find out if there were significant mean differences in academic achievement scores of students across the levels. The scores were subjected to one way Analysis of Variance and the results are presented in Table 4.17.

Table 4. 17

ANOVA

	Sum of Squares	<i>Df</i>	Mean Square	<i>F</i>	<i>Sig.</i>
Between Groups	1287.97	2	643.99	7.32	.00
Within Groups	32629.25	371	87.95		
Total	33917.22	373			

Note. *df*- degree of freedom; *F*-critical value of F; *Sig.*-significance

The finding presented in Table 4.17 indicate that there were significant mean differences in the academic achievement scores of the respondents across the three different levels of academic self-efficacy ($F(2, 371) = 7.32, p < .00$). To establish how the levels of academic self-efficacy beliefs contributed to the significant mean differences in academic achievement scores, post hoc analysis was conducted. Tukey's Honestly Significant Difference was used and the results are presented in Table 4.18.

Table 4. 18

Results of Post Hoc Analysis for Academic Achievement Scores across the levels of Academic Self-efficacy

(I) ASE Levels	(J) ASE Levels	Mean Difference (I-J)	Std. Error	Sig.
Low	Average	-4.91	3.17	.27
	High	-9.22*	3.33	.02
Average	Low	4.91	3.17	.27
	High	-4.31*	1.28	.00
High	Low	9.22*	3.33	.02
	Average	4.31*	1.28	.00

Note. ASE- Academic self-efficacy; Sig. - Significance

Table 4.18 shows that the mean of academic achievement scores of students with low and average levels of academic self-efficacy did not differ significantly. There was a significant mean difference in academic achievement scores of students with low and high academic self-efficacy beliefs. It was also established that the mean of academic achievement scores of students with average and high academic self-efficacy beliefs differed significantly.

4.4. 3 Discussion of the Findings

The findings of the positive significant relationship between academic self-efficacy beliefs and academic achievement support past research work in the literature reviewed. Carroll, et al. (2009) found that academic self-efficacy beliefs had a positive significant correlation with academic achievement. The students who were found to have high academic self-efficacy beliefs performed better in academics than those students with low academic self-efficacy beliefs. Yazini, Seyis and Altum (2011), Aurah (2013) and Ochieng' (2015) also reported that self-efficacy belief is a significant predictor of academic achievement. According to Schunk (2009) students' goals, drive levels and scholastic performance affect their sufficiency beliefs in education and getting better academic grades. The descriptive statistics of this study revealed that majority of the respondents had average academic self-efficacy beliefs. The same trend was observed in academic achievement scores. The findings imply that the dismal academic achievement among majority of the students in Kiambu Sub County may be due to low academic self-efficacy beliefs.

Self-efficacy of a student motivate the student to use self regulated learning strategies to achieve academic goals (Veresova & Foglava, 2019). The self regulated learning strategies include goal setting, self-evaluation and self-monitoring. These strategies enable the student to remain focused on the academic goal until its achieved. Therefore, consistent use of these strategies eventually leads to academic success. The higher the academic self-efficacy beliefs, the better the self-regulated learning strategies and the higher the learning outcomes and vice versa.

4.5 Prediction of Academic Achievement from Emotional Intelligence and Academic Self-efficacy beliefs

This section presents hypothesis testing and discussion of the findings

4.5.1 Hypothesis Testing

The third objective of this study was to establish if there was a significant prediction equation of academic achievement from the domains of emotional intelligence and academic self-efficacy beliefs.

To achieve this, the scores of academic achievement, emotional intelligence and academic self-efficacy beliefs were subjected to multiple regression analysis. The assumptions of linearity, outliers, homoscedasticity and independent observations were tested and the data met the criteria to be subjected to linear regression analysis (See appendix E).

Table 4. 19

Regression Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.36 ^a	.13	-.12	9.00

a. Predictors: (Constant), IS, EMP, SA, SM, EM, ASE

Note. IS Interpersonal Skills; EMP Empathy; SA Self Awareness; SM Self-Motivation; EM Emotional Management; ASE Academic Self Efficacy

The multiple correlation coefficient is 0.363 which indicates an average prediction of academic achievement from the independent variables. R square is 0.13 which implies

that 13% variance in academic achievement is explained by academic self-efficacy, self-awareness, emotional management, self-motivation, empathy and interpersonal skills.

Table 4. 20

ANOVA Summary Table

Model		Sum of Squares	<i>Df</i>	Mean Square	<i>F</i>	<i>Sig.</i>
1	Regression	4471.23	6	745.21	9.29	.00 ^b
	Residual	29445.99	367	80.23		
	Total	33917.22	373			

a. Dependent Variable: AA

b. Predictors: (Constant), IS, EMP, SA, SM, EM, ASE

Note. AA-Academic Achievement; IS-Interpersonal Skills; EMP-Empathy; SA-Self Awareness; SM-Self-Motivation; EM-Emotional Management; ASE-Academic Self Efficacy

The *F* ratio in the ANOVA table indicates that emotional intelligence and academic self-efficacy significantly predict academic achievement, $F(6, 367) = 9.29, P = .00$. Therefore, the null hypothesis was rejected.

Table 4. 21

Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	33.14	3.39		9.77	.00
ASE	.29	.10	.15	2.78	.00
EI	.15	.05	.16	2.83	.00
SA	.15	.24	.03	.62	.53
EM	.17	.17	.05	1.03	.30
SM	.52	.18	.18	2.85	.00
EMP	.25	.13	.12	1.92	.05
IS	-1.32	.31	-.23	-4.24	.00

Note. IS-Interpersonal Skills; EMP - Empathy; SA-Self Awareness; SM-Self-Motivation EM-Emotional Management, ASE-Academic Self Efficacy; IE-Emotional Intelligence; AA - Academic Achievement.

The results in Table 4.18 show that the predictive value of emotional intelligence was 0.15 while that of academic self-efficacy was 0.29. Academic self-efficacy predicted academic achievement better than emotional intelligence.

From Table 4.18, the prediction equation of academic achievement from academic self-efficacy and the domains of emotional intelligence is;

$$\hat{y} = 0.29ASE + 0.15SA + 0.17EM + 0.52SM + 0.25EMP - 1.32IS + 33.14$$

As indicated, self-motivation has the highest predictive index followed by academic self-awareness and then academic self-efficacy. Self-awareness, emotional management and empathy have weak positive predictive index. A positive variation in these variables leads to improvement in academic achievement. On the other hand, interpersonal skills

have a negative predictive value. The results imply that increase in interpersonal skills leads to a decline in academic achievement.

4.5.2 Discussion of the Results

The findings indicate that students who reported high academic self-efficacy, self-awareness, emotional management, self-motivation and empathy had better scores in academic achievement. The findings were consistent with the results of Yahaya et al. (2011) who established that there was a significant relationship between self-awareness ($r = .21$), emotional management ($r = .21$) and empathy ($r = .21$) at the level of $p < .05$ with academic achievement.

Babelan and Moenikia (2010) also reported similar findings in a study that explored the predictive index of emotional intelligence on academic achievement among students who were enrolled in distance education in Iran. Multiple regression was used to analyze the data and the results showed that there was a significant predictive relationship between the diemnsions of emotional intelligence. The emotional intelligence domains that predicted academic achievement include; interpersonal realtioship, social awareness, self-motivation self-expression and self-awareness. In India, Maraichelvi and Rajan (2013) showed that emotional intelligence significantly predicts academic achievement. The study established that those students who had higher scores in emotional awareness scored highly in academic achievement. A study by Yazici, Seyis and Altun(2011) established that interpersonal relationships, ability to manage stress and adaptability significantly predicted academic achievement. Interpersonal relationships domain was found to have the highest predictive power ($r = .46, p = .00$) compared to the rest of the domains.

Regarding academic self-efficacy, Tenaw (2013) established that academic self-efficacy beliefs significantly predicted academic achievement of students. These findings were attributed to the fact that students with high academic self-efficacy attribute success to their ability and effort. Another research by Betoret, Rosello and Artiga (2017) showed that self-efficacy predicted academic achievement. Hassan et al. (2015) also reported that self-efficacy significantly predicted academic achievement. The students who had high academic self-efficacy beliefs recorded high academic scores in subsequent achievement tests. Students who believe that they have what it takes to succeed in academics, persist in problem solving and do not give up easily. They are always motivated to learn, seek support and approach learning tasks with a positive attitude. In the long run, the students end up succeeding in their academic endeavors.

The results indicate that regardless of culture, level of education and age, academic self efficacy is a significant predictor of academic achievement. Based on the findings, the below average performance in most secondary schools in Kiambu Sub county may be attributed to below average emotional intelligence and academic self-efficacy. However, there are other factors such as teaching methods and cognitive ability that may be attributed to academic achievement of the students.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of the findings, conclusions based on the study objectives and recommendations.

5.2 Summary

The aim of this study was to find out the relationship between emotional intelligence and academic achievement, the relationship between academic self- efficacy beliefs and academic achievement of students and to establish the prediction equation of academic achievement from emotional intelligence and academic self-efficacy beliefs.

Concerning the relationship between emotional intelligence and academic achievement, the study established that the two variables had a significant positive relationship. It was established that majority of the respondents had high emotional intelligence. Analysis of academic achievement scores revealed that majority of the respondents had average scores. Further analysis of emotional intelligence scores showed that girls' boarding schools had the highest mean score followed by mixed public day schools and boys' boarding schools had the least mean score. The results of one way ANOVA on the mean differences in academic achievement scores based on the three levels of emotional intelligence, showed that the three group differed significantly. Post hoc analysis showed that the significant mean difference in academic achievement scores was between students with average and high levels of emotional intelligence. There was no

significant mean difference in academic achievement scores for students with low-high and low-average emotional intelligence.

A significant positive correlation was found between academic self-efficacy and academic achievement. The results imply that the higher the academic self-efficacy beliefs, the higher the academic achievement scores and vice versa. Academic self-efficacy beliefs were categorized into three groups namely low, average and high. Based on the three categories, further analysis using one way ANOVA showed that there significant mean differences in academic achievement scores of the students. Post hoc analysis results using Tukey's Honestly Significant Difference indicated that academic achievement scores of students with low and high academic self-efficacy beliefs differed significantly. It was also established that the mean of academic achievement scores of students with average and high academic self-efficacy beliefs differed significantly. There was no significant mean difference in academic achievement scores for students with low and average academic self-efficacy beliefs.

Regarding the prediction of academic achievement from emotional intelligence domains and academic self-efficacy, the results indicated that the independent variables significantly predicted the dependent variable. The findings indicated that self-motivation had the highest positive predictive index followed by academic self-efficacy. Self-awareness, emotional management and empathy have weak positive predictive index. These factors were found to explain 13.2 % variance in academic achievement score. Interpersonal skills were found to have a negative predictive value.

5.3 Conclusion

The first objective of this study was to find out the relationship between emotional intelligence and academic achievement. The findings showed that the two variables had a significant positive correlation. The findings imply that the higher the emotional intelligence, the better the academic achievement score and vice versa. Students with high emotional intelligence were found to perform better than those who had low emotional intelligence. Based on these findings, secondary school students should be trained on emotional management skills so that they can better understand their emotions and those of others to enhance learning and academic achievement.

In the second objective, the researcher wanted to find the relationship between academic self-efficacy and academic achievement. The results showed that there was a positive significant relationship between academic self-efficacy and academic achievement scores. The implication of these findings is that, the higher the academic self-efficacy beliefs, the higher the academic achievement score. Therefore, the students who had higher score in academic self-efficacy beliefs performed better in academics compared to those students who had a lower academic self-efficacy beliefs.

The third objective of this study was to find out if there was a significant prediction equation for academic achievement score from the domains of emotional intelligence and academic self-efficacy. The findings showed that academic self-efficacy beliefs and domains of emotional intelligence apart from interpersonal skills significantly predict academic achievement score. These variables were found to explain 13.2 % variance in academic achievement score.

5.4 Recommendations

From the study findings, the following policy and further research recommendations are made;

5.4.1 Policy Recommendations

i. Since the researcher found that emotional intelligence, academic self-efficacy and academic achievement were significantly related, teachers should come up with training programs for students on the development of emotional intelligence skills and academic self-efficacy. This will program will enhance emotional intelligence and academic self-efficacy of students and hence improve their academic achievement.

ii. Parents should provide a supportive home environment to nurture the development of emotional intelligence skills and high academic self-efficacy to enhance academic achievement.

iii. Students should focus on learning experiences that enhance the development of emotional intelligence and academic self-efficacy for better academic achievement.

5.4.2 Recommendations for Further Research

i. This study focused on the relationship between emotional intelligence, academic self-efficacy beliefs and academic achievement. Since the study found that the variables are significantly related, further research on the predictors of emotional intelligence and academic self-efficacy should be carried out to find out the factors that can be manipulated to enhance them.

ii. Similar studies should be carried out in other counties using samples of primary school pupils and college students to enhance knowledge in this area.

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APPENDICES

Appendix A : Consent Form

Kenyatta University

P.O. BOX 43844

NAIROBI

1/5/2017

Dear Student,

I am a post graduate student at Kenyatta University pursuing a Master of Education Degree in Educational Psychology. I am conducting a research on the above topic in Kiambu Sub county about *Emotional intelligence and self-efficacy beliefs as predictors of academic performance among students in secondary schools*. The information that will be obtained from your institution will be handled in a confidential and professional manner. When responses and data are released, they will be reported in summary form only and no information that may reveal your identity will be included in any discussion of the results. I agree to participate in the study.

Signature.....

Thank you.

Yours sincerely,

Jane Muiga

E55/CE/25435/2014

Appendix B : The Students' Questionnaire

Instructions:

Please answer all the questions as honestly as possible. Information collected will be treated in utmost confidentiality and only used for the purposes of this study.

Kindly participate by ticking as appropriate. Do not write your name or name of your school on this questionnaire. Do not share your answers with anyone.

Section A: Background Information

1. What is your gender?

Male

Female

2. How old are you ? 14 – 18 [] 19 – 25 [] 25 – above []

Section B: Academic Self-Efficacy Beliefs

Using a scale of: not at all = 1 [], a little well =2 [], fairly well = 3[]
pretty well = 4 [] and Very well = 5 []

Respond to the following questions as faithfully and sincerely as possible. Tick as appropriate

	1 = not at all	2 = a little well	3 = fairly well,	4 = pretty well	5= very well
3. How well can you get teachers to help you when you get stuck on Schoolwork?					
4. How well can you study when there are other interesting things to do?					
5. How well can you study a chapter for a test?					
6. How well do you succeed in finishing all your homework every day?					
7. How well can you pay attention during every class?					
8. How well do you succeed in understanding all subjects in school?					

9. How well do you succeed in satisfying your parents with your schoolwork?					
10. How well do you succeed in passing a test?					

Section C: Emotional Intelligence

Using a scale of: Never = 1 [], Rarely =2 [], Sometimes = 3[]

Almost always = 4 [] and Always = 5 []

Respond to the following as faithfully and sincerely as possible. Tick [√] as appropriate

	Never	Rarely	Sometimes	Almost Always	Always
Self-awareness					
11. How often do you express own feelings?					

12. How often do you recognize the situations that trigger your emotions?					
13. How often do you realize that your own feelings impact your performance?					
Emotional management					
14.I resist the impulse to act immediately					
15.I behave calmly in stressful situations					
16.I stay composed and positive, even in trying moments					
17.I calm others in stressful situations					
Self- motivation					
18.I persists in seeking goals despite obstacles and setbacks					
19.I operate from hope of success rather than fear of					

Failure					
20. I do not take setbacks personally					
21. I see obstacles as an opportunity to learn and develop					
Empathy					
22. I pay attention and listens to others					
23. I ask questions to understand another person					
24. I accurately read people's moods, feelings or non-verbal cues					
25. I respect, treat with courtesy and relates well to people of diverse backgrounds					
26. I respond to stereotyping by stating and appreciating another person's uniqueness					
27. I demonstrate an ability to see things from someone					


else's perspective					
28.I understand the underlying causes for someone's feelings, behaviour or concerns					
Interpersonal skills					
29. I accurately read key relationships and social networks in groups, organization or the wider world					
30. I understand the school's values and culture					

Appendix C: Research Permit


THIS IS TO CERTIFY THAT:
MISS. JANE WAMBURA MUIGA
of KENYATTA UNIVERSITY, 447-900
KIAMBU, has been permitted to conduct
research in Kiambu County

on the topic: EMOTIONAL INTELLIGENCE
AND ACADEMIC SELF EFFICACY BELIEFS
AS PREDICTORS OF ACADEMIC
ACHIEVEMENT AMONG FORM FOUR
STUDENTS IN KIAMBU COUNTY KENYA

for the period ending:
23rd July, 2020


.....
Applicant's
Signature

Permit No : NACOSTI/P/19/42768/31717
Date Of Issue : 25th July, 2019
Fee Received :Ksh 1000


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


THE SCIENCE, TECHNOLOGY AND
INNOVATION ACT, 2013

The Grant of Research Licenses is guided by the Science,
Technology and Innovation (Research Licensing) Regulations, 2014.

CONDITIONS

1. The License is valid for the proposed research, location and specified period.
2. The License and any rights thereunder are non-transferable.
3. The Licensee shall inform the County Governor before commencement of the research.
4. Excavation, filming and collection of specimens are subject to further necessary clearance from relevant Government Agencies.
5. The License does not give authority to transfer research materials.
6. NACOSTI may monitor and evaluate the licensed research project.
7. The Licensee shall submit one hard copy and upload a soft copy of their final report within one year of completion of the research.
8. NACOSTI reserves the right to modify the conditions of the License including cancellation without prior notice.

REPUBLIC OF KENYA


National Commission for Science,
Technology and Innovation

RESEARCH LICENSE

Serial No.A 26086

CONDITIONS: see back page

National Commission for Science, Technology and innovation
P.O. Box 30623 - 00100, Nairobi, Kenya
TEL: 020 400 7000, 0713 788787, 0735 404245
Email: dg@nacosti.go.ke, registry@nacosti.go.ke
Website: www.nacosti.go.ke

Appendix D : Authorization Letters



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

NACOSTI, Upper Kabete
Off Waiyaki Way
P.O. Box 30623-00100
NAIROBI-KENYA

Ref. No. NACOSTI/P/19/42768/31717

Date: 25th July, 2019

Jane Wambura Muiga
Kenyatta University
P.O. Box 43844-00100
NAIROBI

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on "*Emotional intelligence and academic self efficacy beliefs as predictors of academic achievement among form four students in Kiambu County, Kenya*" I am pleased to inform you that you have been authorized to undertake research in **Kiambu County** for the period ending **23rd July, 2020**.

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

Kindly note that, as an applicant who has been licensed under the Science, Technology and Innovation Act, 2013 to conduct research in Kenya, you shall deposit a **copy** of the final research report to the Commission within **one year** of completion. The soft copy of the same should be submitted through the Online Research Information System.

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

Copy to:

The County Commissioner
Kiambu County.

The County Director of Education
Kiambu County.

National Commission for Science, Technology and Innovation is ISO9001:2008 Certified



KENYATTA UNIVERSITY
GRADUATE SCHOOL

E-mail: dean-graduate@ku.ac.ke

Website: www.ku.ac.ke

P.O. Box 43844, 00100
NAIROBI, KENYA
Tel. 8710901 Ext. 57530

Our Ref: E55/CE/25435/2014

DATE: 3rd June, 2019

Director General,
National Commission for Science, Technology
and Innovation
P.O. Box 30623-00100
NAIROBI

Dear Sir/Madam,

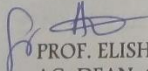
RE: RESEARCH AUTHORIZATION FOR MUIGA W. JANE – REG. NO. E55/CE/25435/2014.

I write to introduce Ms. Muiga W. Jane who is a Postgraduate Student of this University. She is registered for M.Ed degree programme in the Department of Educational Psychology.

Ms. Jane intends to conduct research for a M.Ed Project Proposal entitled, “Emotional intelligence and academic self-efficacy beliefs as predictors of academic achievement among form four students in Kiambu County, Kenya”.

Any assistance given will be highly appreciated.

Yours faithfully,


PROF. ELISHIBA KIMANI
AG: DEAN, GRADUATE SCHOOL

AM/ik



KENYATTA UNIVERSITY
GRADUATE SCHOOL

E-mail: dean-graduate@ku.ac.ke

P.O. Box 43844, 00100
NAIROBI, KENYA
Tel. 810901 Ext. 4150

Website: www.ku.ac.ke

Internal Memo

FROM: Dean, Graduate School

DATE: 3rd June, 2019

TO: Muiga W. Jane
C/o Educational Psychology Dept.

REF: E55/CE/25435/2014

SUBJECT: APPROVAL OF RESEARCH PROJECT PROPOSAL

This is to inform you that Graduate School Board at its meeting of 22nd May, 2019 approved your Research Project Proposal for the M.Ed Degree Entitled, "Emotional intelligence and academic self-efficacy beliefs as predictors of academic achievement among form four students in Kiambu County, Kenya".

You may now proceed with your Data Collection, Subject to Clearance with Director General, National Commission for Science, Technology and Innovation.

As you embark on your data collection, please note that you will be required to submit to Graduate School completed Supervision Tracking Forms per semester. The form has been developed to replace the Progress Report Forms. The Supervision Tracking Forms are available at the University's Website under Graduate School webpage downloads.

Thank you.

ANNBELL MWANIKI
FOR: DEAN, GRADUATE SCHOOL

c.c. Chairman, Educational Psychology Department.

Supervisors:

I. Dr. Doyne Mugambi
C/o Department of Educational Psychology,
Kenyatta University

AM/ik



MINISTRY OF EDUCATION
State Department of Early Learning & Basic Education

Telephone: Kiambu (office) 020-2044686
FAX NO. 020-2090948
Email: directoreducationkiambu@yahoo.com

COUNTY DIRECTOR OF EDUCATION
KIAMBU COUNTY
P. O. Box 2300
KIAMBU

When replying please quote

KBU/CDE/DEPT 8/Vol. I/(54)

12th September, 2019

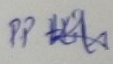

Jane Wambura Muiga
Kenyatta University
P.O Box 43844-00100
NAIROBI

RE: RESEARCH AUTHORIZATION

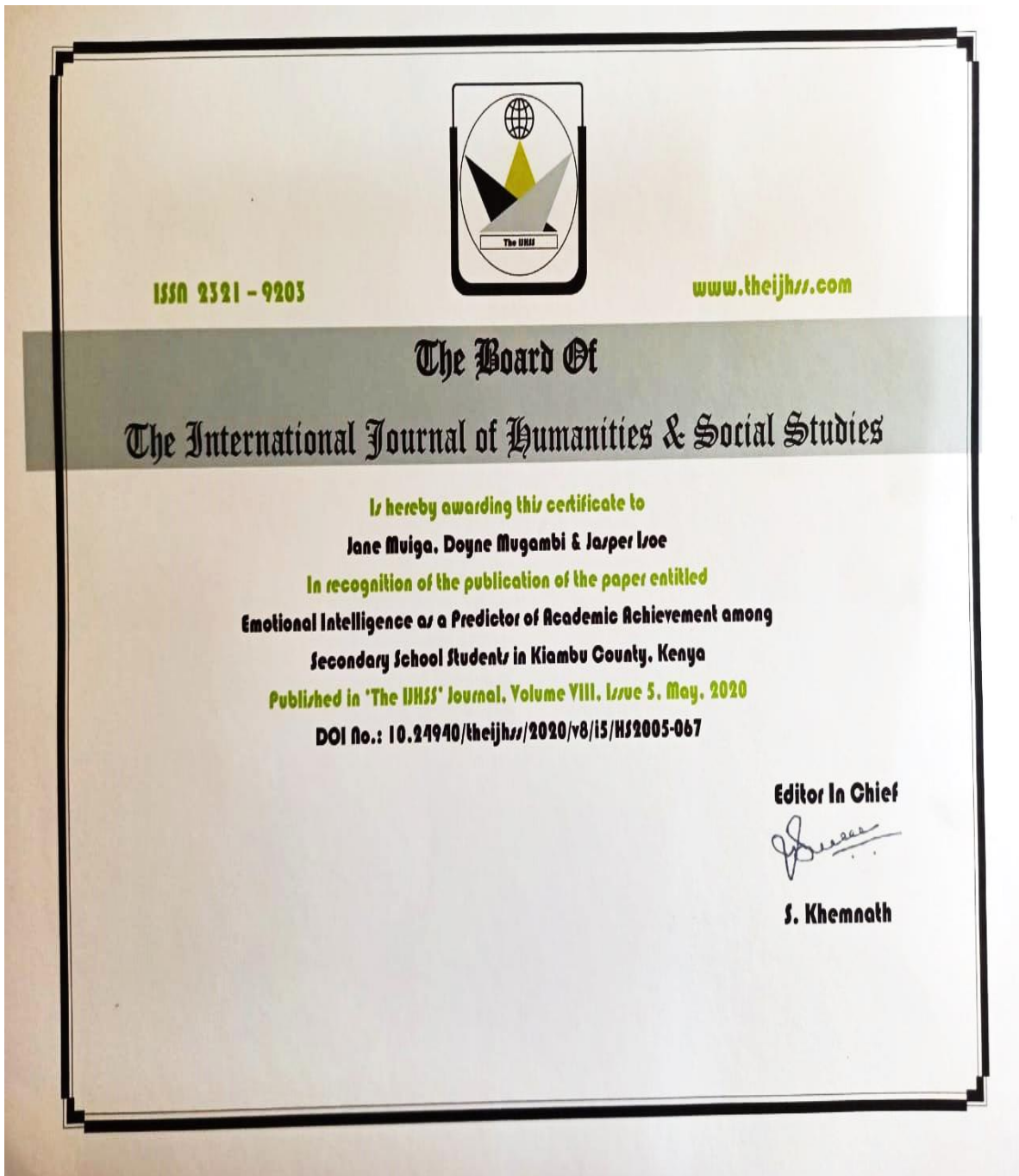
Reference is made to the National Commission for Science Technology and Innovation letter Ref. No NACOSTI/P/42768/31717 dated 25th July, 2019.

The above named has been authorized to carry out research on "*Emotional intelligence and academic self-efficacy beliefs as predictors of academic achievement among form four students in Kiambu County, Kenya*" for a period ending 23rd July, 2020.

Please accord her the necessary assistance.

PP 

VICTORIA W. MULI
COUNTY DIRECTOR OF EDUCATION
KIAMBU COUNTY

Appendix E : Publication Certificate



Appendix F : Scatter plot for Academic Achievement and Academic Self-efficacy scores

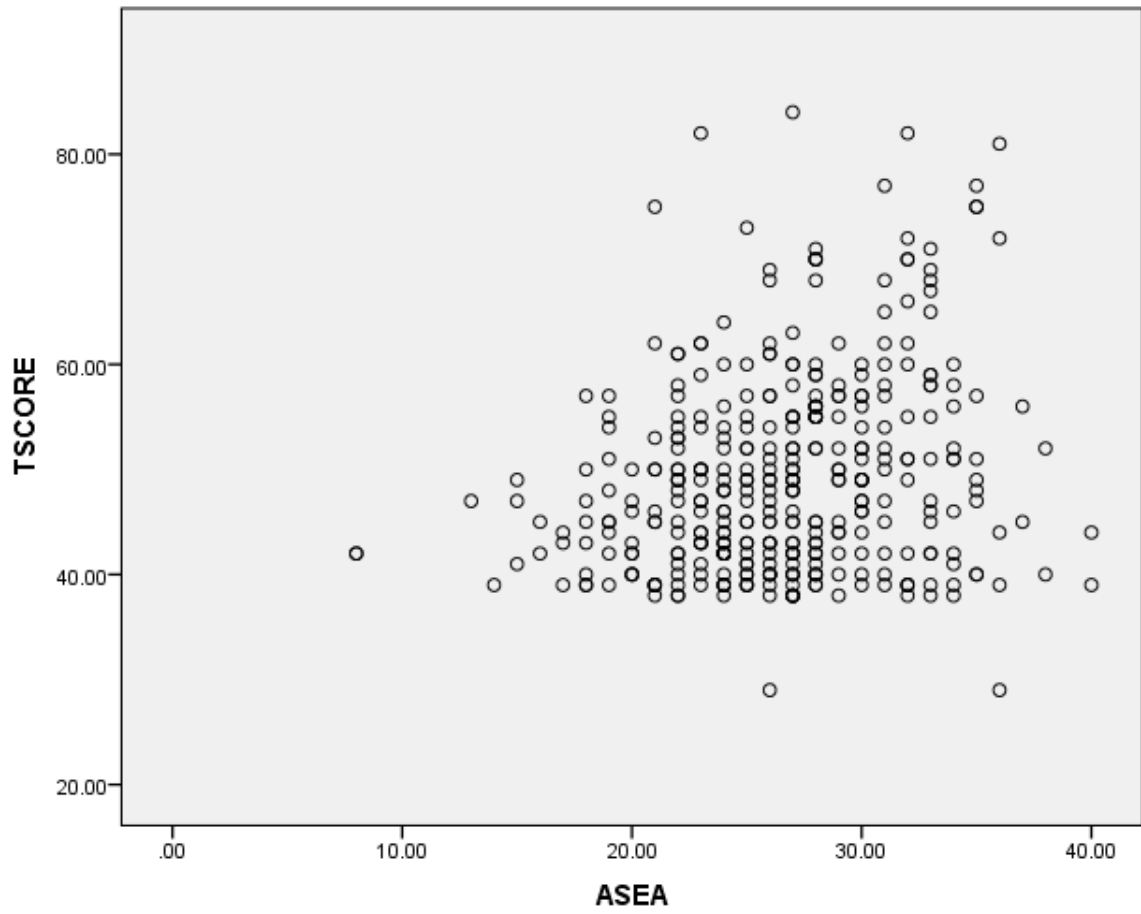


Figure E: Scatter plot for Academic Achievement and Academic Self-efficacy scores

Appendix G : Scatter plot for Academic Achievement and Emotional Intelligence scores

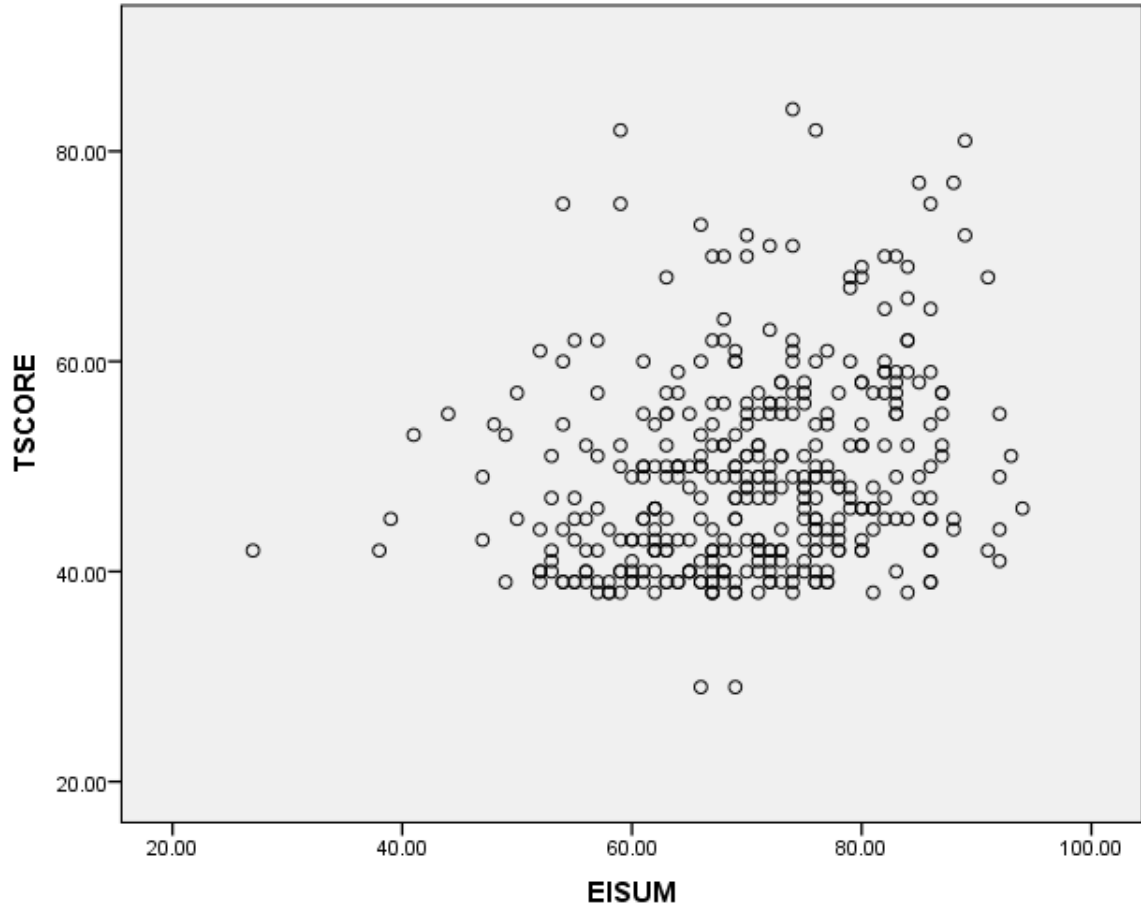


Figure F: Scatter plot for Academic Achievement and Emotional Intelligence scores

Appendix H

Normal P-P Plot of Regression Standardized Residual

Dependent Variable: TSCORE

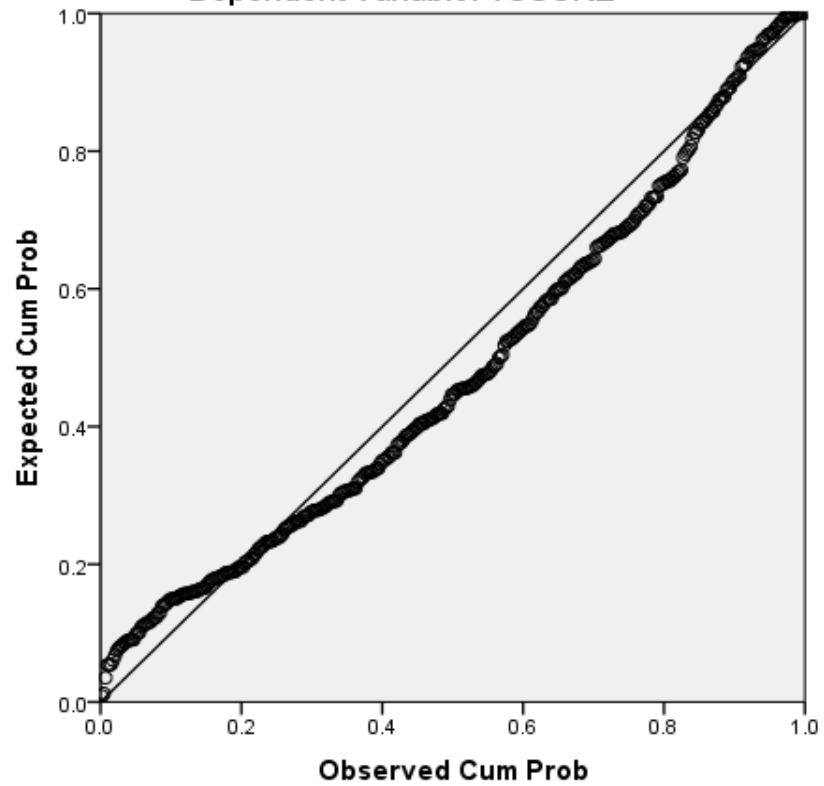


Figure G: Normal P-P plot of Regression Standardized residual Dependent Variable

Appendix I: Map of Kiambu County

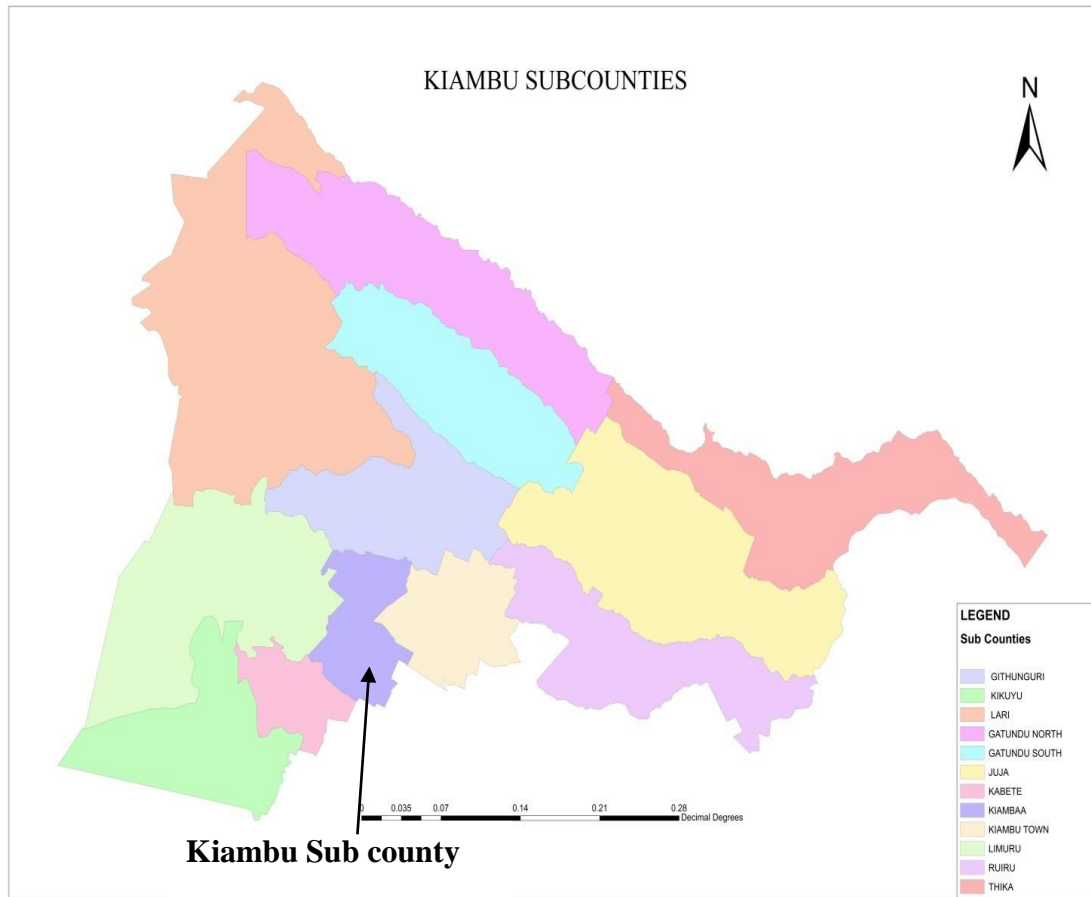


Figure H: Map of Kiambu County