AUTONOMY, ATTITUDE AND INTEREST TO LEARN AS PREDICTORS OF ACADEMIC PERFOMANCE AMONG SECONDARY SCHOOL STUDENTS IN KITUI COUNTY, KENYA

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DECLARATION

I declare that this research thesis is my original work and has not been presented in any other university/institution for consideration of any certification. This research thesis has been complemented by referenced sources duly acknowledged; where text, data, graphics or tables have been borrowed from other sources, including the internet, these are specifically accredited and references cited using the current APA system and in accordance with anti-plagiarism regulations.

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DEDICATION

I dedicate this research work to my dear parents. My dad, Julius Mutinda Kuma and my mother, Naom Ndekw'a Mutinda for their love, encouragement and their greatest effort to ensure that I acquire education.

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ABBREVIATIONS AND ACRONYMS

FDSE	Free Day Secondary Education
FPE	Free Primary Education
GCSE	General Certificate of Secondary Education
GPA	Gross Product Achievement
KCSE	Kenya Certificate of Secondary Education
KNEC	Kenya National Examinations Council
KUCCPS	Kenya Universities and Colleges Central Placement Service
LAP-SF	Learner Autonomy Profile- Short Form
MKO	More Knowledgeable Other
NACOSTI	National Council for Science, Technology and Innovation
SCDE	Sub County Director of Education
SPSS	Statistical Package for Social Sciences
UNESCO	United Nations Educational, Scientific and Cultural Organization
USA	United States of America
ZPD	Zone of Proximal Development

ABSTRACT

From 2012 to 2018, performance in the Kenya Certificate of Secondary Education by students in Kitui County has been consistently low. Learner autonomy, attitude towards school, and interest in learning were all linked to academic performance in the county in this report. The study's four goals were to determine the direction and magnitude of the relationship between each predictor variable and academic performance, as well as to develop a predictive equation for academic performance using the three predictor variables. This research was focused on Vygotsky's sociocultural theory, which considers learning to be a social process that takes place within a cultural context. In the year 2019, the study used a correlational research design with 420 form three students in Tseikuru Sub County as the target population. Public secondary schools in Tseikuru Sub County, as well as form three students, were randomly selected. The number of participants per school was determined using proportionate sampling, while the study participants were chosen using simple random sampling. The information was gathered using an adapted questionnaire. The teacher's assessment records were used to obtain the students' academic performance ratings. A pilot study was conducted to allow the researcher to determine internal accuracy reliability and assess the test instruments' validity. The pilot study's findings were consistent to those of the main study. The data was analyzed using the Statistical Package for Social Sciences (SPSS) (Version 21). Multiple regression analysis and Pearson product moment correlation were used to test the hypotheses. Learner autonomy had a significant positive correlation with academic performance ($r(175)=.28$, p.05), attitude towards school had a significant positive correlation with academic performance ($r(175)=.12$, p.05), and interest to learn had a high positive significant correlation with academic performance ($r(175)=.87$, p.05), according to the results of this study. The study's main finding was that learner autonomy, attitude towards school and interest in learning are both positive correlates and important predictors of academic performance. It was suggested that learner autonomy be encouraged, as well as a positive attitude towards school and interest to learn among students. It was suggested that more research be done on attitudes toward teachers, learning, and attitude towards a specific topic. More research on the role of gender in mediating the relationship between autonomy, attitude towards school, and interest in learning and learners' academic performance is also recommended. In addition, the study recommends further research on whether the relationship between autonomy, attitude towards school and interest to learn varies depending on category of the school and a comparative study between poorly performing and well performing schools.

CHAPTER ONE

INTRODUCTION AND BACKGROUND TO THE STUDY

1.1 Introduction

This chapter provides background information for the study as well as a statement of the problem. The study's purpose, objectives, and research questions are also covered in this chapter. This chapter discusses the study's significance, limitations, and delimitations, as well as the study's assumptions, theoretical and conceptual framework, and operational definitions of terms.

1.2 Background to the Study

Students' academic performance at the secondary level of education is highly valued in many countries across the world. Oluminde et al., (2015), assert that secondary education forms ones' foundation for learning in post-secondary institutions. These post-secondary institutions include universities which offer both diploma and degree courses, middle level colleges offering diploma and certificate courses and other tertiary institutions which offer certificate and artisan courses. This means that a learner's success in secondary school is a determinant of which institution of higher learning one qualifies to attend and also which career path to follow there. Admission to post-secondary institutions in Kenya's 8-4-4 educational system is based on performance in the Kenya Certificate of Secondary Education (KCSE).

Kenya Universities and Colleges Central Placement Service (KUCCPS) is responsible for admission of students to various post-secondary institutions as well as placement of students in various courses. KUCCPS has set up a criterion of weighted count of

points which is calculated using performance in some selected subjects. This criterion is used to determine the course which the learner qualifies to pursue at either degree, diploma or certificate level. Due to these strict requirements, learners who perform poorly at the secondary level of education may miss opportunities to join institutions of higher learning (Kapur, 2018).

Students' academic performance at the secondary level is also significant because it promotes individual development and sense of worth of a person. The Kenyan Basic Education Act (2012) states that form four level of education is the basic education that each Kenyan should achieve. The Kenyan government has implemented a number of policies to ensure that the majority of Kenyans have access to basic education, including the introduction of Free Primary Education (FPE), Free Day Secondary Education (FDSE), and a program to ensure that all learners graduate from primary to secondary school successfully. Increased enrollment in primary and secondary schools has resulted from FPE and FDSE, while the 100 percent transition campaign has facilitated completion of the basic education levels. Students' performance in academics at this level is also a determinant of the society's general development because high literacy rate is a positive indicator of society's development (Umar et al., 2015). In addition, grading and certification in Kenya and many other countries is based on academic performance.

Learners who perform poorly in academics become frustrated as well as their parents and guardians who have heavily invested in educating those children. According to Benjamin (2013), a society whose learners perform poorly in academics experiences shortage of skilled labour in many sectors. When many sectors of the economy have inadequate

skilled labour, the economic development of a country lags behind. Due to the much concern about academic performance, many scholars, researchers and policy makers across the world have been working tirelessly towards finding a solution to learners' poor performance in academics (Aloka et al., 2016).

There are several factors that impact on secondary school students' academic success. The factors identified most frequently in existing research include learners' self-concept, the learners' abilities, socioeconomic background of the learner, learner autonomy, attitude of the learner, and interest to learn (Ahmadi & Izadpanah, 2019; Alshumaimeri & Borg, 2019; Hansen & Henderson,2019; Liem, 2019; Thomson,2018; Veresova & Mala, 2016). Learners' academic success has been shown to be influenced by these factors in studies conducted around the world. Learner autonomy refers to a practice of independence, control and being responsible and self-directed to one's learning activities (Alshumaimeri & Borg, 2019). Learners who practice autonomy reflect on their learning by setting realistic goals and planning how to achieve the goals. Autonomous learners are characterized by having high level of discipline, readiness to pursue learning tasks, being analytical and having awareness of their strengths and weaknesses. The learners use evaluation criteria to gauge themselves and they demonstrate high level of skills. These characteristics make them become responsible for their own learning and it leads to improved academic performance (Ata et al., 2015). According to Kabiri et al., (2018), autonomous learners have a self-drive and initiate as well as pursue learning tasks without much supervision from their teachers. Researchers have attempted to find out how learner autonomy influences the learners' performance in academics. Learner

autonomy was found to have a positive effect on students' academic performance according to studies conducted in United States of America (USA), Chile and Nepal (Ata et al., 2015; Correa-perez & Sanhueza-Jara, 2019; Paudel, 2019).

Fareo (2019) define learner's attitude as the learner's way of thinking, behaving and acting in certain situations such as learning situation or towards a particular thing such as a school or a teacher. Learner's attitude towards the school, teachers or learning influences the behavior of the learner and consequently influences the learner's academic performance (Veresova & Mala, 2016). Some learners may have positive attitude towards their school while other learners may have a negative attitude towards their school. The way students feel about their school has a major impact on their academic success. Learners with a positive attitude about their school enjoy going to school and work hard to perform well in examinations and preserve their school's good reputation. Learners who have a negative attitude about education, on the other hand, despise their school and often complain about different aspects of it, such as teachers, school services, or the school administration.

Globally, the influence of learners' attitude on academic performance has been widely researched and studies conducted in Hongkong, Nigeria, Ghana and Slovakia provided evidence that learners' attitude influences their academic performance (Anu, 2018; Chio et al., 2015; Fareo, 2019; Veresova & Mala, 2016). Since these researchers linked a positive attitude towards school to a positive deviation in academic performance, students with a negative attitude towards school could struggle to adjust to school system and may not do well in examinations. Academic achievement is influenced by both attitude and

autonomy. This was evidenced by studies conducted in Vietnam and Thailand (Phuong & Vo, 2019; Orawiwatnakul & Wichadee, 2017). These studies found that the two variables are positive indicators of students' academic achievement. Olumide et al., (2015) define interest to learn as the learners' predisposition to react positively towards some learning aspects. A learner who has interest in learning demonstrates enjoyment of learning activities and always shows willingness to engage in learning activities. These learners engage in difficult tasks and work hard amidst enduring challenges till they end up succeeding. This is why Abaidoo (2018) associated increased interest of the learners with their improved performance in academics. Research studies have reported that learners' interest in learning is positively related to their academic success in various parts of the world, including China, Nigeria, and the United States. Learners' interest in learning can also be used to predict their academic success (Edem et al., 2015; Nxumalo, 2016; Zheng & Guo, 2019). Both attitude and learning interest were found to be good predictors of academic achievement in studies conducted in Nigeria and Libya (Abidin et al., 2012; Joe, Kpolovie & Okoto, 2014). Academic performance in Kenya is viewed as integral part of quality education (United Nations Educational, Scientific and Cultural Organization, UNESCO, 2011). The Ministry of Education and Kenya National Examinations Council collaborate in monitoring administration of national examinations to ensure honesty is upheld and reliable results are obtained. Teachers, counselors, psychologists, and school administrators are concerned about the factors that influence students' academic performance as a result of this emphasis on academic performance (Wanyama, 2013). In a study conducted at Kiambu, students' attitudes toward teachers, learning, and the school were found to be a good predictors of their performance (Langat,

2015). However, there have been a few studies in Kitui County on how these variables predict academic attainment. Since the county's KCSE output has been consistently low from 2012 to 2018, the aim of this study was to see if learner autonomy, attitude toward school, and interest in learning are among the factors that relate to and predict Kitui County students' academic performance.

1.3 Statement of the Problem

Despite the government of Kenya's efforts to promote excellent performance in national examinations by reducing the number of compulsory examinable subjects in the KCSE and increasing the number of optional subjects, Kitui County consistently performed poorly in the KCSE from 2012 to 2018. In the seven years, the county's KCSE mean score fluctuated between 4.52 and 5.67. Although the county's mean score has not been consistently below the national mean score during the stated period, some sub counties in the county have consistently posted performance below the national mean score for the seven years. The statistics on KCSE performance are presented in Table 1.1.

Table 1.1.

KCSE Performance Mean scores from 2012 to 2018

YEAR	2012	2013	2014	2015	2016	2017	2018
National	5.17	5.12	5.39	5.46	4.03	3.72	3.95
Kitui	4.59	5.15	5.07	5.67	4.52	4.89	4.10
Tseikuru	3.96	4.57	4.20	4.11	3.50	3.49	3.35

Source: County Director of Education, Kitui County (2019)

With reference to Tseikuru Sub County, statistics in Table 1.1 show that this sub county has consistently recorded low performance from 2012 to 2018. For the seven years, the sub county's Mean score has been below the county mean score as well as the national Mean score. In addition, as indicated in appendix L, the Mean score for Tseikuru Sub county has been lower than that of the most sub counties in the county. This is an indication of poor performance. This dismal performance called for a need to conduct a study on factors which predict academic performance in Tseikuru Sub County. Although influence of learner attitude had been studied in Kitui County, little had been done to establish how it works together with learner autonomy and interest to learn to predict learners' performance in academics in the county.

Since these factors were found to significantly influence academic performance in studies done in counties such as Kiambu and Eldoret, there was a need to determine whether these factors could explain students' performance in academics in Kitui County. Considering that Tseikuru Sub county is among the three sub counties in Kitui County which posted the lowest Mean score from 2012 to 2018, there was need for a study addressing how the three factors predict academic performance in Kitui County.

1.3.1 Purpose of the Study

The aim of this study was to see the extent to which learner autonomy, attitude towards school, and interest in learning predicted secondary school students' academic performance in Kitui County. The study also aimed to develop an equation that could be used to predict secondary school students' academic performance based on learner autonomy, attitude towards school, and interest in learning.

1.3.2 Objectives of the Study

The objectives of this study were to:

i. Establish the relationship between learner autonomy and students' academic performance.
ii. Test for the relationship between attitude towards school and students' academic performance.
iii. Find out how interest to learn relates to students 'academic performance.
iv. Determine an equation for predicting students' academic performance in Kitui County using learner autonomy, attitude towards school and interest to learn.

1.3.3 Alternative Hypotheses

According to the study's objectives, the following alternative hypotheses were developed:

$Ha_{1:}$ There is a significant relationship between learner autonomy and secondary school students' academic performance.

Ha_{2}: There is a significant relationship between attitude towards school and students' academic performance.

$Ha_{3:}$ There is a significant relationship between interest to learn and students' academic performance.

$Ha_{4:}$ Secondary school students' academic performance can be significantly predicted using learner autonomy, attitude towards school and interest to learn.

1.4 Significance of the Study

This study suggests an equation that may help educational stakeholders predict academic performance of the learners using learner autonomy, attitude towards school and interest to learn. The equation can be used to predict the academic performance of the learners in Kitui County as well as other counties in Kenya which record consistent low performance in academics as Kitui County. The study's findings may provide teachers an insight on the importance of learner autonomy, learners' attitude towards school and interest in learning. Using the findings of this study, the teachers can draw some information on how they can foster autonomy among learners and the different ways in which they can cultivate positive attitude and arouse learners' interest in learning. The study also has important information that can guide teachers on how to handle learners who have different learning abilities. Furthermore, the results of this study can indicate a variety of intervention strategies that can be used to increase autonomy, foster a positive attitude towards school, and arouse interest in learning, all of which will improve learners' academic performance. Finally, the findings of this study can contribute to the literature on how learner autonomy, attitude towards school, and learning interest influence secondary school students' academic performance in a Kenyan sample.

1.5 Limitations and Delimitations

1.5.1 Limitations

Many factors have an effect on high school students' academic performance. As a result, factors that the researcher did not wish to investigate may have had an effect on academic results. Students' self-reports were used to collect data. Respondents may have been

subjective and offered answers that seemed to favor them when filling out the questionnaires.

Because of the respondents' subjectivity, the findings may not be a true representation of the respondents in relation to the variables under analysis. Furthermore, the correlational analysis design used in this study does not allow for variable manipulation. Therefore, causal relationships among variables were not established in this study.

1.5.2 Delimitations

This study was delimited to Kitui County. The data were collected from Tseikuru Sub County. The study's findings may be generalized to the other sub counties within the county which have consistently performed poorly. These sub counties which have consistently registered low performance as Tseikuru Sub County include Mumoni Sub County and Mwingi East Sub County. If a sub county within the county does not have similar characteristics in terms of academic performance as Tseikuru Sub County, caution should be exercised when extrapolating these results to such sub counties. Among the many factors that influence secondary school students' academic performance, this study looked at the relationship between academic performance and three variables: learner autonomy, attitude towards school, and interest to learn. The other factors which influence academic performance of the learners were not studied. Correlational study design was used while data collection was done using questionnaires.

Furthermore, only form three students from ten public secondary schools in Tseikuru Sub County were included in the report.

1.6 Assumptions of the Study

The first assumption was that the respondents gave honest responses when rating themselves on different scales in the questionnaire. The second assumption was that the students involved in this study had similar learning experiences because they were all drawn from public high schools in one Sub County. It was assumed that in these different secondary schools, the students were taught using similar teaching methods and a similar evaluation criterion was applied in all the schools. Finally, it was assumed that the assessment tests which teachers give to students at the end of the term were valid and reliable instruments for academic performance.

1.7 Theoretical and Conceptual Framework

1.7.1 Theoretical Framework

a) Sociocultural Theory (Vygotsky, 1978)

The basis for this research was sociocultural theory. Lev Vygotsky founded sociocultural theory in 1978. In this theory, human learning is described as a social process that takes place within a cultural context. Social interactions between a learner and a more experienced person, such as a teacher or a parent, result in learning and information acquisition. The cultural context is the setting which is conducive for facilitating the process of learning. This cultural setting may be either at home or at school. Language and other instruments play a role in the learning process. These tools may be physical tangible items such as school resources or psychological tools such as counseling. A range of resources for promoting learning should be available in every cultural context where learning takes place. Interaction would be impossible without language and other

resources and lack of interaction inhibits learning. The Zone of Proximal Development (ZPD) was created by Vygotsky. According to the theory, one's cognitive development is influenced by the ZPD, and the initiation of mental processes is largely based on interactions between learners and more experienced people. The ZPD is the contrast between a learner's current experience and what the learner will learn with the aid of more knowledgeable people (Vygotsky, 1978).Vygotsky referred to the adult or more competent peer as the More Knowledgeable Other (MKO). In a school environment, the MKO is the instructor. The MKO aids students in gaining skills that they lack but are capable of learning.

A learner cannot fully absorb knowledge without interacting with the MKO. The cultural background of a school provides an ideal setting for contact between the learner and the MKO. The numerous services available at the school are the instruments that promote contact between students and teachers, allowing for learning to occur.

According to this theory, socialization is among the factors which promote individual's cognitive development. Vygotsky, (1978) asserts that learning in an individual occurs at two levels. First people learn by interacting with others which is the social level. Later, people learn at an individual level whereby they integrate whatever they learnt through interaction into their mental structure. Through the social interaction, teachers influence the children’s learning by assisting them pursue learning tasks which they could not do on their own. This helps the learners to extend their ZPD. The instructor models desired learning activities and eventually transfers responsibility for learning to the student (Christmas et al., 2013). This was referred to as scaffolding by Vygotsky. The scaffolding

method includes assisting a learner from the point of not knowing something to mastery of a concept and the ability to present the concept without the need for assistance from the instructor. Once the learner has internalized the problem-solving processes, the instructor dismantles the scaffold. Dismantling the scaffold is the process of withdrawing the assistance provided and letting the learner perform learning tasks individually. After the scaffold has been removed, any learner who has completely benefited from the scaffolding process no longer needs the teacher's assistance.

Tharp and Gallimmore (1990) created a model that instructs teachers on how to use ZPD in their teaching and learning. There are four stages to this model. The learner acquires skills in the first stage with the help of the instructor or other more capable peers. Language and other tools are used by the teacher to help the learner in acquiring knowledge. In this stage, the learner solely relies on assistance provided by the MKO. In the next stage, the learners use the already acquired knowledge to perform learning tasks. Although the learner's performance has not completely improved, the learner accomplishes learning tasks without assistance. Learner autonomy begins to emerge at this point, as the learner is able to perform learning activities independently. The third stage of the model involves learners showing improvement in performance of learning tasks. Once the performance of the learner becomes automatized, the learner is not forced to think or rely on previous knowledge in order to do a particular learning task. Learners at this stage have fixed knowledge which is not easily forgotten. Learner autonomy has fully developed in this stage. Deautomatization which involves repeating a learning task while relying on the knowledge acquired in the past learning experience occurs in this

stage. A learner who successfully goes through the four stages of the model becomes fully autonomous. Learner autonomy is a motivating factor which makes the learners interact more with the tools at school as they enjoy pursuing learning tasks. This leads to development of positive attitude and interest in learning.

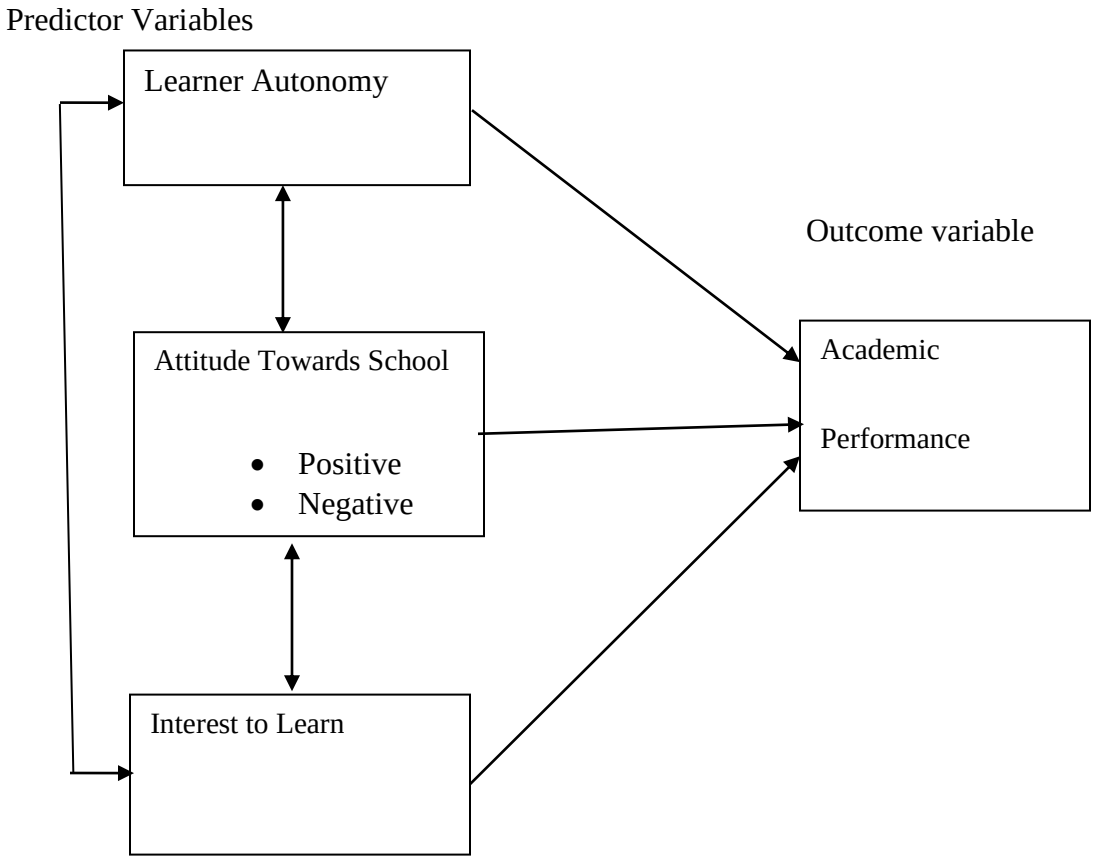
Vygotsky's theory also focuses at how socialization between the teacher and the learners is influenced by culture and history of the school. These two factors characterize the school environment where learning takes place. Each school has its own culture and its unique history which is a big determinant of how teachers and learners socialize in that setting. The school has mediation tools which aid construction and provide means for internalizing the knowledge to aid future independent problem-solving activity. (Amir et al., 2014). This means that if students have a positive attitude about school and a desire to learn, they will use the school's mediation resources to gain more information, thus enhancing their academic performance.

Sociocultural theory has been used as a basis of many studies on how learners can perform with assistance or without assistance (Campione & Brown, 1984; Feuerstein, 1984). Recently, the theory is being relied upon when designing technologies for distance education (Palinscar & Scott, 2013). In addition, research has proposed that Vygotskian approach to teaching and learning is a core aspect that should be incorporated in teacher professional development trainings (Shabani, 2016). Shabani further argues that incorporation of the core tenets of Vygotsky's theory in teacher training modules can help to bridge existing gaps in the teacher training which had not been addressed for long.

This theory was found to be appropriate for linking the variables in this study because learners who have successfully gone through the four stages of operationalization of ZPD become fully autonomous. Practice of autonomy increases interaction with tools at school arousing interest towards learning. Autonomous learners with interest to learn are likely to like and develop positive attitude towards their school. If learners couple autonomy with positive attitude towards school and interest to learn, there are high chances of performing well in academics.

1.7.2 Conceptual Framework

Figure 1.2. Conceptual Framework



Note. ⟶ Direction of relationship

From the above conceptual framework, learner autonomy, attitude towards school and interest to learn individually and collectively relate to academic performance. Learners who practice autonomy take more responsibility in their learning and this leads to improved academic performance. Learners whose attitude is positively oriented towards their school are more likely to engage with the school's mediating resources, which improves their performance in academics. Further, learners who have interest in learning enjoy learning tasks. This promotes their performance in academics.

1.8 Operational Definition of Terms

Academic performance	Student's average score in the end of Term three-2019 examination.
Attitude towards school	A learner's liking for the school as indicated by a score in attitude towards school scale.
Interest to learn	A learner's enjoyment of learning as determined by a score in interest to learn scale.
Learner autonomy	Whether a student reads or does learning exercises `independently as indicated by a score in learner autonomy scale.

CHAPTER TWO:

REVIEW OF RELATED L ITERATURE

2.1 Introduction

A summary of the literature relevant to the thesis is presented in this chapter. There are six parts in this chapter. The introduction is the first section. The second, third, and fourth parts cover a summary of the literature on how learner autonomy, attitude towards school, and interest to learn are related to academic performance of the learners. The fifth section looks at how the three predictor variables can be used to predict academic performance. Finally, the examined literature is summarized and the gaps which were identified in each of these fields were discussed.

2.2 Relationship between Learner Autonomy and Academic Performance

This section's literature focuses on the relationship between learner autonomy and academic performance.

Researchers interested in determining how learner autonomy relates to academic performance have looked at the effect of learner autonomy on academic performance among high school and university students. Bravo et al., (2017) found a connection between learner autonomy and English performance in an Ecuadorian study. The participants were undergraduate students from ten public universities who were enrolled in a variety of courses. All of the universities involved taught English language classes. The study included a total of 862 students (437 females) with an average age of 20.50 years. In this correlational analysis, data was collected using Spratt et al., (2002) learner's autonomy scale. The learners' academic progress was determined by the performance of

their English end-of-semester examinations. Learner autonomy and English scores had a positive relationship, according to the findings. The fact that the research focused on performance in a single subject among university students limits the findings' generalizability in describing students' overall academic performance. The current study bridged this gap by establishing a connection between learner autonomy and secondary school students' overall performance.

A study by Phoung and Phoung (2019) found a connection between learners' autonomy and their English results. Final-year students at a Vietnamese university were the study's target population. Purposive sampling was used to compile a group of 229 participants (males=171) who were all between the ages of 19 and 21. Data was gathered using survey questionnaires. Learner autonomy was found to be positively linked to English success in this research. The limitation which was noted in this study was that purposive sampling which was employed in selecting the sample is prone to biasness. In order to reduce biasness, the current study used proportionate and random sampling techniques in selecting the sample. Another limitation of this study was that it was conducted in only one institution thus limiting the generalizability of the findings across many institutions. To address this gap, the current study drew a sample from 10 institutions in order to produce more generalizable findings.

Tsai (2019) investigated whether learner autonomy affects students' performance when studying English as a second language. With 124 participants, a quasi-experimental method was used. There were two classes of participants: experimental (n=64) and control (n=60). Both the pre-test and post-test data were collected using questionnaires.

The findings of the data analysis revealed significant difference in performance between the experimental and control groups of students. The major limitation of this study was use of quasi experimental design which does give the researcher room to randomly assign participants in either experimental or control group. This lowers the internal validity of the results as well as limiting the generalizability of the findings. The current study has addressed this gap by using correlational design whereby participants were randomly picked.

Pudiquet et al., (2019) looked at how autonomous learning influences the academic performance of undergraduate pre-service teachers. A random sample of 85 students from Nueva Vizcaya University's Bambag Campus in the Philippines was selected. An existing questionnaire was used to collect data.

Students' average grades in science-related subjects were used as a gauge of academic achievement. It was found that there was no significant correlation between autonomy and academic achievement. Since this study related autonomy to performance in science related subjects, the current study focused on overall performance of the learners in order to produce more generalizable findings.

Alrabai (2017) examined the relationship between learners' autonomy and their English results. The study included 630 participants (males = 327) ranging in age from 15 to over 25 years old. The participants' educational levels ranged from intermediate through high school to university. Data was collected using adapted questionnaires and structured achievement assessments in a survey study design. Learner autonomy was found to be positively linked to learners' English results. Despite the fact that this study focused on

the relationship between autonomy and student success at various levels of education, it was only limited to one subject. As a result, a study that links learner autonomy to overall performance of the learners became necessary; a gap that the current study filled.

Malik and Rizvi (2018) investigated how learners' classroom autonomy practices impact their academic achievement in Mathematics. The research included 516 10th grade students from Pakistan's Teshil Rawalpindi and Isalamabad districts. Data was collected using a correlational design and a classroom environment instrument. Pearson product moment correlation and ANOVA were used to analyze the results. There was no significant connection between learner autonomy and mathematical performance, according to the findings. The results may not adequately explain how learner autonomy relates to learners' overall academic performance. In order to address this gap, the current study correlated autonomy to learners' overall academic performance.

2.3 Relationship between Attitude towards School and Academic Performance

The literature reviewed in this section focus on how learners' attitude towards school relate with learners' academic performance. Various studies have explored this relationship among secondary school and university students.

Asrat (2017) looked at secondary school students in Ethiopia's Gondar region to see if there was a connection between their attitude and their academic performance. The study's target population consisted of 1202 ninth-graders (641 participants were female). A total of 362 students were chosen using a systematic and multi-stage sampling process from three secondary schools. Data was collected using the Attitude towards School Questionnaire, as well as a review of learners' average examination scores from 2016.

The study found a positive and meaningful association between students' attitude towards school and their academic achievement using correlational analysis. However, taking a sample from three secondary schools limits the findings' generalizability. The current study drew a sample from ten secondary schools in order to achieve more representative sample.

Veresova and Mala (2016) looked at whether or not students' attitude towards school and learning affect their grades. The goal population was secondary school students in the Slovak Republic. The research included 269 students (146 girls), with an average age of 17.69 years and a range of 17 to 19. A correlational research design was applied in this study. Data on participants' attitude towards school were collected using a self-developed questionnaire. The learners' academic achievement was measured by their GPA and average in three main subjects: Mathematics, Slovak language, and English language. According to this study, it was found that there was a strong connection between students' attitude towards school and their academic performance. The self-developed questionnaire which was used to collect data may have been biased. Furthermore, the validity and reliability of a self-developed questionnaire cannot be determined. This limitation was addressed in the current study by adopting already existing scales with confirmed reliabilities for collecting data.

Chio et al., (2015) investigated the impact of students' attitudes on academic achievement among Chinese Macau undergraduates. A convenient sample of 135 students (80 females) from three universities was used in the study. The study was conducted using survey research design and data were collected using questionnaires. The scores of the

attitude scale correlated positively with students' academic achievement scores. However, this study confined itself to a population of university students in China. The researchers asserted that parents and the entire society in China place high demands on learners as far as performance in academics is concerned. It is possible that the study's results were heavily influenced by Chinese culture. Furthermore, according to Vygotsky's theory, the cultural context influences learning and may have an effect on students' academic performance. The current study was conducted among secondary school students in Kenya, a country with a similar culture and educational system to China in terms of student results to determine whether similar findings would be obtained.

In a study of undergraduate students done in Iraq, the relationship between attitude towards learning and academic achievement was examined (Abdullah et al., 2015). The target population was 3534 Koya University second and fourth-year students. In order to select a sample of 800 participants from different university faculties, proportionate, stratified, and random sampling techniques were used. A quantitative method study design was used, and data was collected using a questionnaire created by the researcher. The learners' annual average performance in the previous year was the measure of academic achievement. This study found that there was a positive and significant relationship between learners' attitude and their academic achievement. However, this study had some limitations. Given that the study was done in one institution, the findings of this study may not be generalizable across many institutions. In addition, the researcher prepared instrument may not be reliable. These gaps have been addressed in the current study which drew sample from 10 secondary schools to make the

findings more generalizable. The current study adopted already developed tools with confirmed reliabilities.

Lee (2016) conducted a study involving the review of PISA data sets in order to determine if students' attitudes toward school would accurately predict their academic achievement. The approach used in this analysis was structural equation modeling. The academic achievement data sets of learners in Mathematics and Reading for the years 2003, 2009, and 2012 were analyzed. The results of the data analysis revealed that there was no relationship between attitude towards school and learners' academic achievement. The current study was done to determine whether similar findings would be obtained.

Isah (2015) looked at how students' attitudes affected their grades in senior secondary school. A total of 430 students took part in the investigation. A correlational study design was used, and data was collected using questionnaires and performance assessments created by the researcher. The results of the data analysis showed that there is a strong significant association between students' attitudes toward school and their academic success. However, the validity of self-developed questionnaires is unknown, and the findings may not be applicable to other populations. To fill this void, the current study adapted previously established data collection instruments.

2.4 Relationship between Interest to Learn and Academic Performance

This section presents literature that was reviewed on how interest to learn relates with academic performance of learners at different levels of education.

Edem et al., (2015) investigated how students' desire to learn influences their academic performance in social studies at tertiary institutions. This study focused on 1343 students from Akamkpa and Obudu colleges in Nigeria's Cross River state. The study design was expost facto. A sample of 753 students was involved in the study. Students' interest in social studies questionnaire and a researcher developed social studies achievement test were used to collect data. Correlation results revealed a positive significant relationship between interest to learn and the social studies GPA. Since this study focused on performance in one subject among college students, the results may not adequately explain how interest to learn influences academic performance of the secondary school students. This gap was addressed in the current study by investigating how interest to learn influences the overall performance of the secondary school students.

In New Delhi, India, Dev (2016) investigated the relationship between interest in learning and academic achievement among elementary students. The students in this study were in grade vii. A random sample of 110 (girls=55) participants aged 13 to 14 years old was chosen. The chosen group had a mean age of 13.6 years. Descriptive research design in form of ex post facto method was employed. The multiphasic interest inventory (Bawa, 1998) was used to collect data on learners' interests, while their academic achievement scores were derived from their annual examination grades. Learning interest and academic achievement were found to be positively and substantially linked, as per the correlation between the two variables. Given that this study was done among primary school learners in India where culture is different to that of Kenya, it was important to do a similar study using a sample drawn from a Kenyan setting.

For a study on how students' preferences affect academic performance, Nxumalo (2016) recruited 71 undergraduate students (49 females) from a New York university. The participants were 18 to 25 years old and in their first to fourth year of college studies. Ex post facto research design was applied and data collection was done online using modified Student Interest Questionnaire, Survey Monkey module and Facebook website. It was found that learners' interest in learning related positively to the learners' academic performance. Use of online data collection became a limitation because some questionnaires were not fully completed. This lowered the number of participants resulting to a small sample size which may not fully reflect the characteristics of the entire population. In the current study, the questionnaires were administered in a face to face interaction. The researcher supervised the exercise of filling questionnaires with the aim of minimizing the incompleteness and ensuring that respondents fully completed the questionnaires.

Eduwem et al., (2017) studied senior secondary school students in the Calabar metropolis region of Cross River State, Nigeria, in an attempt to explore how interest of the learners relates to their performance in Mathematics. Six schools were purposively sampled while 300 participants were selected randomly. Causal comparative research design was adopted in this study. Data were collected using researcher developed questionnaire and Mathematics achievement test. The collected data were analysed using SPSS (version 21). It was found that there was a significant positive correlation between interest and Mathematics performance scores. One limitation of this study was that it was subject based and its findings may not be utilised when explaining how interest relates to the

overall performance of the learners. In addition, the researcher prepared tools may not be applicable to other populations. The current study looked at how interest to learn relates to the overall performance of the secondary school students in order to obtain more generalizable findings.

Zheng and Guo (2019) investigated how academic interest affects medical students' academic attainment. A total of 54 398 students (28 064 females) were selected from 87 colleges and universities. These individuals were enrolled in various medical programs. The research design used in this study was cross sectional. The researcher used propensity score matching model to compare effects of interest across the different disciplines of medicine. Pearson product moment correlation was used to measure the relationship between academic interest and academic performance. The results showed that there was a positive relationship between academic interest and academic performance. This study was done among medical students who had already specialized in different medical courses. Students who have specialized in various courses may have developed interest in those specific courses thus biasing the obtained results. It was important to do such a study among secondary school students to determine whether similar results would be obtained.

Ezike (2018) investigated the relationship between students' academic interest and their academic achievement in Chemistry. A total of 208 form two students from public secondary schools in Oyo State, Nigeria, were chosen at random. Achievement in a Chemistry test and students' academic interest questionnaire were used for data collection. After analyzing the data, it was discovered that there was no connection

between academic interest and academic achievement. Focussing on performance in a specific subject limited the generalizability of the findings of this study. The current study has addressed this limitation by correlating interest in academics with the learners' overall performance. Since this study targeted form two students on the basis that they were not being prepared for any external examination immediately, it was important to do another study to find out whether similar findings would be obtained when the participants are form three students who are being prepared to sit for a national examination the following year. The current study was done among form three students who were being prepared to sit for KCSE the following year.

2.5 Prediction of Academic Performance

The literature reviewed in this section looked at how learners' performance in academics could be predicted using learner autonomy, attitude towards school, and interest to learn. In this review, only a single study looked at the joint role of the three variables in predicting academic performance of the learners. The other studies which have been reviewed focuses on a combination of either two of the three variables in predicting the academic performance of the learners. All the same, the studies provide empirical evidence that academic performance can be predicted using the stated predictor variables.

Mukhwana (2013) investigated how learner autonomy, attitude, and interest in learning were linked to students' Biology results. A total of 200 form three students and 25 Biology teachers were recruited from ten secondary schools in the Eldoret municipality for the study. A Survey design was used and data were collected using questionnaires and interviews. The findings indicated that each of the three variables significantly related to

the students' performance in Biology. However, this study had some limitations. The study looked at performance in Biology and not the overall performance. In addition, the study did not show the interaction of the variables and their prediction of performance. The present study addressed these gaps by looking at the joint influence of these variables on students' performance in academics.

Joe et al., (2014) investigated how students' attitudes toward school and interest in learning predicted their academic achievement in secondary school in Nigeria's Bayesla State. The study involved 518 participants who were selected randomly. Multiple prediction research design was used in this study. Through multiple regression analysis, it was found that interest in learning and attitude towards school were significant predictors of learners' academic achievement. Since this study predicted academic achievement using two predictor variables, the current study added one more predictor variable. Thus the current study looked at how learners' academic performance can be predicted using learner autonomy, attitude towards school and interest to learn.

Ata et al., (2015) conducted a study among high school and university students in the Chicago area to see whether learner autonomy and engagement in learning predicted academic achievement. Data was collected from 800 participants aged 14 to 21 years old using a survey study design. Data collection was done using questionnaires which were either filled online or manually. Through regression analysis, it was established that both autonomy and interest to learn are significant predictors of learners' academic performance at both secondary and university levels of education. The current study was designed with a focus on secondary school students to provide more information on how

attitude can be combined with other variables to jointly predict learners' academic performance.

Another study conducted at Yildiz and Yeditepe universities in Turkey looked at the role of learner autonomy and interest in learning in predicting undergraduates' English language results (Alci et al., 2015). The study included a total of 183 students, 138 of whom were female. This analysis used a descriptive research design. Data was collected using the autonomous learning scale (Macaskill & Taylor, 2010) and the language learning orientation questionnaire (Noel et al., 2000). The results of this study showed that both learner autonomy and interest to learn significantly predicted learners' performance in English. Since this study focussed on university students, it was important to do the current study which looked at how the variables predict the secondary school students' performance.

Sunday and Gbore (2012) looked at how to predict students' academic attainment based on their attitude towards school and desire to learn. The participants in the study were 30 junior secondary school students from two secondary schools in Nigeria's Ondo state. The students were grouped into high, medium and low ability groups. Quasi experimental research design was employed. Data were collected using Science oriented attitude scale, Science vocational interest scale and achievement tests. Data analysis was done using multiple regression. The study found that attitude towards school and interest to learn significantly predicted academic achievement. However, this study involved a small sample drawn from only two schools. This limits generalisation of the findings to many schools. The current study addressed this limitation by drawing participants from 10

secondary schools which would give a more representative sample of the area under study.

2.6 Summary of Literature Review and Gap Identification

This section presents the summary of the literature reviewed in the different sections of the chapter.

The studies reviewed on the relationship between learner autonomy and academic performance mostly involved university and secondary school students. These studies focused on performance in either a specific subject or a specific course. There is no study which looked at the overall academic performance of the secondary school students. Most of these studies reported existence of a positive relationship between learner autonomy and learners' academic performance. However, there were controversies in literature whereby studies done in Pakistan and Philippines reported existence of nonsignificant relationship between learner autonomy and academic achievement.

The reviewed studies on attitude towards school as a correlate of academic performance focused on high school and university students to see whether there was a connection between students' attitudes toward school and their academic performance. The tools used for data collection in these studies were either adapted or self-developed. Most studies looked at learners' overall performance or academic achievement but one study looked at performance in a specific subject. All the studies reviewed in this section reported that attitude towards school significantly and positively related to learners' academic performance.

The literature reviewed on how interest to learn relates to learners' academic performance had studies which drew participants from secondary schools, colleges and universities. Data collection in some studies was done via questionnaires administered either manually or online. All the reviewed studies reported that there is a positive relationship between interest to learn and learners' performance in academics. These studies suggested that arousing learners' interest in learning boosts the performance of the learners. However, these studies either focused on specific subject or course or had low response rate in online collection of data.

The single research which addressed the role of learner autonomy, attitude towards school and interest to learn in predicting academic performance reported that the three variables were good predictors of learners' academic performance. The other studies which looked at a combination of two of the predictor variables to predict academic performance also found that the variables significantly predicted academic performance. Given that most studies focused on performance in a specific subject or course and did not focus on how the three variables jointly predict academic performance, the current study addressed these gaps by studying the role of autonomy, attitude towards school and interest to learn in predicting the overall academic performance of the secondary school students.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

The research design and methodology are highlighted in this chapter. The study's variables, study site, and target population are all covered in this chapter, as well as sampling techniques and sample size, research instruments, and data collection techniques. The chapter also covers instruments' validity and reliability, data analysis as well as logistical and ethical issues.

3.2 Research Design

This study used a correlational research design. Correlational research design, according to Mishra and Alok (2017), is useful in explaining relationships between or among variables in a sample. While no variables are manipulated or causal relationships established by using correlational design, it is possible to measure the relationship between the two variables by measuring and determining the statistical relationship between the variables. This study used a correlational design because it allowed the researcher to explain the relationship between variables and establish how the predictor variables predicted the criterion variable. A correlational design was used to see how learner autonomy, attitude towards school, and interest in learning predicted secondary school students' academic performance.

3.3 Variables

There were four variables in this study. Learner autonomy, attitude towards school, and interest in learning were the predictor variables. The criterion variable was academic

performance. The interval scale of measurement was used to measure all the four variables.

3.4 Research Methodology

A questionnaire was used to collect data, as well as a pro forma capturing the students' examination results. The students completed the questionnaire, while the students' class teachers completed the pro forma form capturing the test results. The researcher was present during the completion of both the questionnaires and the pro formas.

3.5 Location of the Study

The research was carried out in Kitui County in Kenya. The county is found in Kenya's eastern region. There are 340 high schools in the county, with an approximate student population of 47,000. The researcher chose this location because students in the region have consistently performed poorly in KCSE, as shown by the county mean ranking, which has fluctuated between 4.59 and 5.67 between 2012 and 2018. The researcher thought it would be interesting to see whether learner autonomy, attitude towards school, and interest in learning were linked to students' academic performance in the county.

Tseikuru Sub County provided data to the researcher. Tseikuru Sub County was chosen for data collection because it is one of Kitui County's three sub counties that have consistently performed poorly in the KCSE, as shown by the sub county mean score, which has ranged between 3.06 and 4.57 from 2012 to 2018. Conducting research in this field can provide valuable knowledge on how to enhance students' academic performance.

3.6 Target Population

The study's target population was 420 form three students in the year 2019 from ten public secondary schools in Tseikuru Sub County. The target population of 420 students comprised of 181 boys and 239 girls. Boys made up 43.09 percent of the population that could be reached, while girls made up 56.91 percent (Sub County Education Office Tseikuru, 2019).

3.7 Sampling Techniques and Sample Size

3.7.1 Sampling Techniques

The researcher used a variety of sampling methods. Purposive sampling was used to pick students from Tseikuru sub county, public secondary schools, and form three students. The number of participants to be sampled from each school was determined using proportionate sampling. Participants were chosen using simple random sampling in each institution’s form three class.

3.7.2 Sample Size

The formula and table for sample size calculation by Krejcie and Morgan (1970) were used to improve the sample's representativeness. The formula and table were considered to be an effective guide in calculating the sample size since the population of this study was known. The sample size was calculated using the formula indicated.

$$n=\frac{X^2 NP(1-P)}{d^2(N-1)+X^2 P(1-P)}$$

Where

n- Required Sample Size

X - Z Value for the confidence level required

N - Population Size

d - Degrees of Accuracy

P - Population Proportion

As per the records in the Sub County Director of Education (SCDE) office (Tseikuru), the form three students in the targeted public secondary schools in Tseikuru Sub County in the year 2019 were 420. Using the Krejcie and Morgan's table, the minimum sample size for a population of 420 students was 201 students. As a result, the researcher chose 201 students to participate in this report.

These students came from three different categories of secondary schools: girls' only boarding schools, co-educational boarding schools, and co-educational day schools. The number of participants per school and gender are summarized in the sampling distribution presented in Table 3.1.

Table 3.1

Sampling Distribution and Sample Size

School Type	Target Population			Sample Size		
	School	Students		Schools	Students	
		Boys	Girls		Boys	Girls
Girls only Boarding	1	-	78	1	-	37
Co-Ed. Boarding	3	81	92	3	39	44
Co-Ed. Day Schools	6	100	69	6	48	33
Sub-total	-	181	239	-	87	114
		(43.09%)	(56.91%)			
Total	10	420	(100%)	10	201(47.85%)	

Co-Ed = Co- Educational.

3.8 Research Instruments

A self-administered questionnaire and a pro forma summary of students' examination results were used to collect data for this report. The research instruments are summarized in detail in the sub sections which follow.

3.8.1 Questionnaire

A self-administered questionnaire was used to collect data for this analysis. The questionnaire for the students was divided into five parts. The participants were given instructions in Section A. The guidelines included a brief explanation of the questionnaire's intent as well as assurances to the respondents that their responses would be kept confidential.

The items on background details about the respondent were found in Section B. The name of the school, the school's category, the admission number, the participant's age, and gender were all included in this section. The scales for calculating the predictor variables were the final three parts. The Learner Autonomy Scale was in section C, the Attitude towards School Scale was in section D, and the Interest to Learn Scale was in section E. The three scales are discussed briefly below. The full scales appear in Appendix B.

a. Learner Autonomy Scale (Chan et al., 2002)

This ten-item scale measures a learner's ability to take charge of one's own education. The objects were rated on a five-point Likert scale, whereby 1 equals never and 5 equals always. Participants were asked to choose one of the choices that best represented their acts in regard to the presented description. The sum of the participants' scores on the ten items was divided by the number of items. A higher score indicated greater learner autonomy. The range of the scores was from one to five.

b. Attitude Towards School Scale (ATSS, Farnworth et al., 1991)

Attitude towards school scale measures the agreement of the youth on the importance of schoolwork. The scale has 10 items which are rated on four-point Likert scale. Items 1 to 9 used the scale: 1= *Strongly Disagree*, 2=*Disagree*, 3=*Agree* and 4=*Strongly Agree*. Item 10 used the scale: 1=*definitely go out with friends,* 2= *probably go out with friends,* 3=*probably study* and 4=*Definitely study.* The participant was instructed to tick an option which mostly reflects the participant's beliefs. For scoring purposes, the first nine items were assigned point values as indicated: *Strongly Agree-4, Agree-3, Disagree-2 and*

Strongly Disagree-1. Item 10 was assigned point values as indicated: *Definitely go out with friends-1, probably go out with friends-2, probably study-3 and definitely study-4.*Reverse coding was done on items 2, 3, 4 and 5. All the point values were added up and divided by the number of items. The participant's score ranged from 1 to 4. The higher score indicated positive attitude and commitment towards schoolwork. The researcher sought permission to use this scale by writing to the authors and adopted the scale to determine students' attitude towards the school. The scale was relevant to this study because it was developed to measure youth's attitude towards schoolwork.

c. Interest in Learning Scale (ILS, Deci & Ryan, 2000)

This scale was adapted from a subscale of intrinsic motivation inventory. The scale had seven items which are rated using four point Likert scale ranging from 1=*Strongly Agree* to 4=*Strongly Disagree.* During scoring, reverse coding was done on items 3, 6 and 7. The point values were added up and divided by the number of items. The participant's scores ranged from 1 to 4 with the higher score indicating higher interest in learning. The researcher wrote to the authors of this scale to seek permission to use the scale in this study. The researcher adapted this scale to determine learners' interest in learning. The scale was relevant for this study because it was developed to measure the interest towards learning of the middle school learners.

This questionnaire was completed in 40 minutes and the scoring was done to obtain a score for each section. The full questionnaire is given in Appendix B.

3.8.2 Pro Forma Summary of Students' Results

The academic performance scores of each student were collected from the school's progressive records using a researcher-created pro forma (Appendix C), which captured the student's total marks and mean grade for term three of 2019. The researcher translated the learners' raw scores to Z scores so that it could be possible to compare academic results of students drawn from different schools whose end of term three-2019 examinations were different.

3.9 Pilot Study

Prior to the actual research, a pilot study was conducted. The research was conducted at one Secondary School which is a co-educational day school in the locale. The pilot study school was chosen with care. A total of 20 form three students were chosen at random for the analysis. The results of the pilot study were analyzed to assist the researcher in fine-tuning the data collection instrument. During the pilot study, respondents were asked to provide examples of questions that were unclear or that they did not understand so that they could be refined. Secondly, the data analysis aided the researcher in determining the adapted scales' internal accuracy reliability, and validity. Finally, the data from the pilot study was used to confirm that the data analysis methods chosen were suitable. The actual research did not include the high school where the pilot study was performed.

3.9.1 Validity of the Instruments

According to Edwin (2019), the validity of an instrument is the degree to which the scores of items on a scale correctly measure the component in a quantitative sample that they are expected to measure. The researcher asked the supervisors at Kenyatta

University's Department of Educational Psychology for input on the questionnaire's content validity.

3.9.2 Reliability of the Instruments

The internal consistency reliability of the adapted scales was determined using Cronbach's coefficient alpha (α) which ascertains the extent to which items in a single scale measure the same thing. α> .70 is acceptable (Fraenkel & Wallen, 2011). The selected scales had the following α values. Learner Autonomy Scale, α=.75, Attitude Towards School Scale, α=.80, and Interest to Learn Scale, α=.76. Since these values exceeded the minimum acceptable level, the scales were deemed to have internal consistency reliability.

3.10 Data Collection Techniques

The researcher visited the chosen institutions to distribute questionnaires to the students. The researcher made arrangements with each targeted school's administrators for data collection on the designated day. The questionnaires were given out in the afternoon, after the daily day's class sessions had ended. Administration of the questionnaires was done with the assistance of the respective class teachers. After being briefed about the study, the students were given 40 minutes to complete the questionnaire. The pro formas for academic results were filled out by each school's respective class teachers.

3.11 Data Analysis

The information gathered through questionnaires was scored and coded. The academic performance data of the students was translated to standard scores. Using the statistical

tests specified, the quantitative data were analyzed to test the following hypothesis at a=0.05:

H_{O1}: There is no significant relationship between learner autonomy and academic performance among secondary school students. Test: Pearson product moment correlation coefficient.

H_{O2}: There is no significant relationship between attitude towards school and academic performance among secondary school students. Test: Pearson product moment correlation coefficient.

H_{O3}: There is no significant relationship between interest to learn and academic performance among the secondary school students. Test: Pearson product moment correlation coefficient.

H_{O4}: Learner autonomy, attitude towards school and interest to learn do not jointly predict the secondary school students' academic performance. Test: Multiple regression analysis.

Pearson product moment correlation and multiple regression analysis tests were performed with the using Statistical Package for Social Sciences (SPSS, Version 21).

3.12 Logistical and Ethical Considerations

3.12.1 Logistical Considerations

The Graduate School of Kenyatta University granted a study permit. The researcher then applied to the National Council for Science, Technology, and Innovation for a research permit (NACOSTI). Following that, the researcher requested permission to conduct

research from the Kitui County Government, the County's National Government offices, and the Tseikuru Sub County's Sub County Director of Education (SCDE).

Later, the researcher approached the principals of the concerned schools by visiting them at their respective schools and requesting permission to perform the research in their schools. After securing the necessary permits and scheduling data collection dates, the class teachers who were used as research assistants were contacted to assist with the data collection process. Before commencement of the data collection activity in each school, a briefing session was held whereby the research assistants were informed the purpose of the study, the need to uphold confidentiality and how to handle participants during the process of data collection.

3.12.2 Ethical Considerations

The researcher informed the participants of the researcher's intentions and clarified the research's goals and the target group. Students who decided to take part in the research study were given consent forms to fill in and sign. The participants were told that the information they provided would be handled with confidentiality and that it would only be used for research purposes.

The participants were also told that participating in the study would not affect them and that they would be free to leave at any time during the study's course without facing any consequences. Finally, the researcher agreed to inform the participants about the study's results.

CHAPTER FOUR

PRESENTATION OF FINDINGS, INTERPRETATION, AND DISCUSSION

4.1 Introduction

This chapter presents the findings of the study per the objectives and the corresponding hypothesis to be tested. In each section, the relevant statistics relating to the findings are presented using tables, followed by their interpretation, and discussion.

4.2 General and Demographic Information

This section presents the general information on return rate and the demographic characteristics of the respondents. The demographics covered in this section are participants' sex, age, and school category.

4.2.1 Return Rate

This study involved 201 form three students from 10 public secondary schools in Tseikuru Sub County. Out of the sample, a total of 192 students fully consented to complete the questionnaire. Although the purpose of the study was well explained to the participants and confidentiality was promised together with assuring participants that participation had no harm to them; nine students opted to withdraw from the study during the course of administration of questionnaires. These participants argued that their religious beliefs forbade participation in research activities. These respondents were allowed to withdraw unconditionally and their partially completed questionnaires were collected and discarded. Therefore the completed questionnaires which the researcher collected for data coding and analysis were 183 which translated to a return rate of 91.04%. Due to some anomalies which were noted during data coding, some

questionnaires were discarded. An anomaly which formed the basis of excluding three questionnaires was ticking more than one response in an item. The other anomaly which led to discarding five questionnaires was failing to respond to more than four items in each scale. Therefore, a total of eight questionnaires were excluded from the final analysis. After the exclusions, 175 questionnaires provided the data that were coded and analyzed translating to actual return rate of 87.06%. The return rate per category of the school and gender is summarized in Table 4.1.

Table 4.1

Return Rate by Gender and Category of the School

Category of school	Boys	Girls	Total
Co-educational day schools	36	37	73
Co-educational boarding schools	40	25	65
Girls only Boarding school	0	37	37
Totals	76	99	175

The statistics presented in Table 4.1 indicate that girls constituted a slightly higher number than the boys. This is because apart from the girls who were drawn from co-educational schools, there were others who were sampled from girls' only boarding school. On the other hand, Tseikuru Sub County has no boys' only boarding school. Although there is one private girls' only boarding school in Tseikuru Sub County, it was not involved because this study was delimited to public secondary schools.

The data presented in the Table 4.1 indicates that co-educational day secondary schools contributed the highest number of participants. This is because this category constitutes the highest number of secondary schools in the sub county. There are a total of eight pure co-educational day secondary schools in the sub county while the three co-educational boarding schools in Tseikuru Sub County have a day school wing. This number translates to 11 out of 12 public secondary schools in the sub county offering education under the day schooling programme.

In addition, although girls' only boarding school category had only one school, more than a third of the girls who participated in the study were drawn from this school. The reason for that was that the school has a higher population and a higher number of form three students than all the other schools. Through proportionate sampling, the number of participants per school category was determined relative to the targeted population.

4.2.2 Demographic Data on Sex and Age

This sub section presents a description of the characteristics of the respondents in terms of sex and age. The relevant statistics and discussion regarding to these variables are given.

The participants had a mean age of 18.17 years (*SD* =1.35) with a range of 16-23 years. Boys had a mean age of 18.51 years (*SD* = 1.52) whereas the girls' mean age was 17.88 (*SD*=1.11). Participants' ages were then grouped into four categories as presented in Table 4.2.

Table 4.2

Frequency of Age per Categories.

Age Category	16-17	18-19	20-21	22-23
Frequency	53	95	23	4
Percentage	30.28%	54.29%	13.14%	2.29%

As indicated in the Table 4.2, the group of respondents aged between 18 and 19 years had the highest frequency while the least were in the category of 22 years and above. One of the factors which may be attributed to having majority of the form three students in Tseikuru Sub County being 18 years and above is that most adult people who live in the rural areas of Tseikuru Sub County have attained only the primary level of education and there are some who have not attained any formal education. These parents with wanting levels of education may delay in enrolling their children in school as they may be putting little emphasis in education (Mutua et al., 2014).

In addition, the mean age was calculated as per the category of the school. The results of these calculations are shown in Table 4.3.

Table 4.3

Participant's Mean Age by Category of the School

School category	n	Mean	SD
Co-educational day schools	73	18.34	1.37
Co-educational boarding	65	18.21	1.47
Girls only Boarding	37	17.74	0.89

The data in Table 4.3 show that respondents from co-educational day schools had the highest mean age while respondents from the girls' only schools had the lowest mean age. Notably, majority of participants drawn from co-educational day schools were older than their counterparts drawn from the other categories of schools.

4.3 Relationship between Learner Autonomy and Academic Performance

The study's first objective was to establish the relationship between learner autonomy and learners' academic performance. Learner autonomy was operationally defined as the extent to which a score in learner autonomy scale indicated that a learner independently read or did learning tasks. Therefore, an autonomous learner in that context is the participant who gets high scores in the learner autonomy scale.

In attempts to determine whether learner autonomy and academic performance are correlates, the scores in the learner autonomy scale were correlated with the learners' academic performance scores. The results which yielded from Pearson product moment correlation test were as presented in Table 4.4.

Table 4.4

Relationship between Learner Autonomy and Academic Performance

Variables		Autonomy	A.P
Autonomy	Pearson. Sig(2 tailed)	1	.28**
A.P	Pearson Sig(2 tailed)	.28**	1

Note. n = 175 A.P = Academic Performance

A significant positive correlation between learner autonomy and learners' academic performance was established (r (173) =.28). This means that practicing autonomy among learners in this area will have positive impact on their academic performance. Since this relationship was significant, it implies that Learners who are autonomous may record a positive deviation in their academic performance scores. In connection to the relationship between learner autonomy and academic performance, the null hypothesis had been proposed that there is no significant correlation between learner autonomy and academic performance. The Pearson product moment correlation coefficient was used to test this hypothesis at p.05. The null hypothesis was not supported since the results showed a positive significant association between the two variables. As a result, the null hypothesis was dismissed, and it was determined that learner autonomy and academic performance have a significant positive relationship.

The results of this study are similar to those of Aziz et al., (2011), who looked at how learner autonomy predicts academic achievement among George Washington University undergraduate students. In that study, there was a positive significant relationship

between learners' LAP-SF scores and their university examination scores. The consistency of findings across studies among learners of different levels of education could suggest that learner autonomy, regardless of age or education level, is a significant determinant of academic performance. High school students, like college students, should be encouraged to be more independent of their studies in order to improve their academic performance.

The findings of this study were also in line with those of Onu and Wuave (2014), who looked at the relationship between learner autonomy and performance in Mathematics. In that research, it was discovered that there are significant differences in academic performance between students in the experimental and control groups. The experimental community's students demonstrated autonomy, which was expressed in their Mathematics scores.

Mukhwana (2013) also conducted a study on the relationship between learner autonomy and Biology results, finding a positive significant association between learner autonomy and Biology scores. The current study adds to the growing body of evidence that learner autonomy has a positive impact on overall academic attainment of the learners.

There was no substantial association between learner autonomy and academic achievement of teacher trainees in a study conducted by Pudiquet et al., (2019) among teacher trainees in a university in Philippines. The results of this research contradicted those of previous studies on the relationship between learner autonomy and academic performance. Another research in Pakistan conducted among tenth grade students yielded

contradictory results (Malik & Rizvi, 2018). In this research, it was discovered that there was no substantial association between learners' autonomy and their mathematical results.

4.4 Relationship between Attitude towards School and Academic Performance

The study's second goal was to see if there was a connection between students' attitudes towards school and their academic results. A score on the Attitude towards School Scale was supposed to reflect how students felt about school.

The participants' mean in the Attitude towards School Scale was 3.17 (*SD* = 0.48).The scores of the respondents in the attitude towards school scale ranged between 1.5 and 4.0. The descriptive statistics of the scores are summarized in Table 4.5.

Table 4.5

Summary of Attitude towards school Scores

	n	Min	Max	Mean	SD
Attitude towards school	175	1.5	4.0	3.17	0.48

Note. n = 175 Min= Minimum Score Max= Maximum Score

SD = Standard Deviation

A null hypothesis was developed to test the second objective, which said, "There was no significant association between learners' academic performance and their attitude towards

school." In order to test this hypothesis, the scores on the attitude towards school scale were correlated with the learners' academic achievement scores.

The correlation results were as presented in Table 4.6

Table 4.6

Relationship between Attitude towards School and Academic Performance

Variables		ATS	A.P
ATS	Pearson. sig (2 tailed)	1	.12
A.P	Pearson sig (2 tailed)	.12	1

Note. n=175; A.P=Academic Performance; ATS=Attitude Towards School

A significant positive correlation between attitude towards school and academic performance was established ($r(173) = .12$). The null hypothesis that "there is no significant association between learners' academic performance and their attitude towards school" was not supported by these findings. As a result, the null hypothesis was dismissed, and it was determined that students' attitude towards school had a direct impact on their academic performance.

The findings in this section corroborated previous research findings that found a positive connection between students' attitudes toward school and their academic performance. Chio et al., (2015) conducted a study among Chinese undergraduates, and Li (2012) conducted a study among Hong Kong city university students. Students' attitudes were found to be strongly linked to their GPA scores in those studies.

Given that the results of the current study were consistent with those of the previous studies among university students, one could be persuaded to regard students' attitudes toward school as a strong predictor of academic attainment from high school to university levels. This study's results matched those of a study conducted in Kenya by Kipkoech (2011) among academically gifted students in the Keiyo district. It was discovered in that study that students' attitudes toward their teachers and their learning had a significant impact on their academic achievement. The above research, on the other hand, was limited to gifted students who are naturally concentrated and motivated to succeed in their studies. This orientation may make them have positive attitude towards their teachers and learning thus resulting in the positive relationship between their attitude and academic performance. As such, these results may have limited generalizability across all secondary school students. The current study bridged this gap by focusing on the influence of this variable on academic performance of all secondary school students. Therefore, the findings of the current study provide useful information which can be generalized across typical secondary school students in Kitui County.

Furthermore, the results of this research matched those of a study by Veresova and Mala (2016) on how adolescent's attitude towards school affects academic achievement. It was discovered in that analysis that the two variables have a clear positive correlation. Since the data of that research was collected using a self-developed questionnaire of unknown validity and reliability, it's important to notice that the results of that study are close to the findings of the current study, which used standardized tools.

Similarity of the findings of the two studies leads to the suggestion that attitude towards school plays a key role on promoting learners' academic performance. Therefore, cultivating learners' positive attitude towards school may translate to improved academic performance.

Lee (2016), on the other hand, found contradictory results in a research on the same variables. It was discovered that there was no substantial association between learners' academic achievement and their attitude towards school in this research, which looked at the role of attitude towards school in predicting their academic achievement in Mathematics and Reading.

4.5 Relationship between Interest to Learn and Academic Performance.

The third objective of this study aimed at finding out how interest to learn relates to learners' academic performance. A participants' interest to learn was inferred from their score in the interest to learn scale. Table 4.7 presents a summary of the participants' scores.

Table 4.7

Summary of participants' scores in Interest to Learn Scale.

Score	Frequency	Percent	Cumulative
2.0	2	1.14	1.14
2.14	3	1.71	3.12
2.29	6	3.43	6.54
2.43	1	0.57	7.11
2.56	1	0.57	7.68
2.57	7	4.0	11.68
2.71	5	2.86	14.54
2.72	1	0.571	5.11
2.85	1	0.571	5.68
2.86	7	4.01	9.68
2.89	2	1.14	20.82
2.90	1	0.57	21.39
3.00	17	9.71	31.10
3.14	17	9.71	40.81
3.29	15	8.57	49.38
3.43	17	9.71	59.09
3.57	37	21.14	80.23
3.71	17	9.71	89.94
3.85-4.00	18	10.29	100
Totals	175	100	100

From Table 4.7, the scores of the participants in this scale ranged between 2.00 and 4.00. Among the participants' scores, a score of 3.57 had the highest frequency. This score was obtained by 21.14 % of the participants. The scoring guideline outlined that a higher score which is above 3.00 indicated a higher interest in learning while a low score which is below 2.00 in the scale indicated that the participant has little interest in learning. A score which ranged between 2.00 and 3.00 indicated that the bearer of the score had average interest in learning. Majority of the participants as shown in the Table 4.7 scored between 3.0 and 4.0. This is an indication that most participants had high interest in learning. The rest of the participants had average interest in learning because their scores ranged between 2.00 and 3.00. As per the results obtained and presented in Table 4.7, there were no participants found to have little or no interest in learning because the lowest score in the scale was 2.00.

In line with the objective of finding out whether interest to learn relates to learners' academic performance, a null hypothesis was formulated that "there is no significant relationship between interest to learn and students' academic performance." In order to establish the extent and direction of relationship between interest to learn and academic performance, the learners' academic performance scores were correlated with their corresponding scores in the interest to learn scale. Pearson product moment correlation coefficient was computed and the results were as presented in Table 4.8.

Table 4.8

Relationship between Interest to Learn and Academic Performance

		ITL	A.P
ITL	Pearson, sig(2 tailed)	1	.87
A.P	Pearson sig(2 tailed)	.87	1

Note. n=175; A.P= Academic Performance; ITL=Interest To Learn.

The results presented in Table 4.8 revealed a strong positive correlation between interest to learn and students' academic performance. This implies that increased interest in learning translates to improved performance of the learners in academics. Therefore, interest in learning significantly relate to learners' good performance in academics. These results did not support the null hypothesis and therefore, it was rejected.

The results of this research were similar to those of a study conducted by Zheng and Guo (2019) among university students enrolled in various medical programs. This study aimed at establishing the relationship between interest in learning and learners' academic performance in the medical courses. The researchers reported a significant positive relationship between the students' interest in learning and their performance in the medical courses. The researchers then recommended that ways of arousing learners' interest in learning should be adopted when teaching medical students since increased interest would translate to improved academic performance. Nxumalo (2016), found similar results among undergraduate students in New York in a survey.

Studies in Nigeria found a strong association between interest in learning and performance in subjects like Social studies and Chemistry (Edem et al., 2015; Ezike, 2018). The new study's results are identical to these findings. Therefore, It can be inferred that interest in learning is a positive correlate of academic performance since a positive correlation has been identified when interest in learning was correlated with performance of learners at various levels of education.

4.6 Prediction of Academic Performance

The fourth objective of this study sought to determine an equation for predicting academic performance using learner autonomy, attitude towards school, and interest to learn.

The objective of determining a predictive equation for academic performance using the three variables was informed by the hypothesis that “learner autonomy, attitude towards school, and interest to learn, do not jointly and significantly predict secondary school students’ academic performance.” This hypothesis was tested using multiple regression analysis. The results of the test are presented in Table 4.9.

Table 4.9

Regression Analysis Results

Model	Co-Efficient		Standardized Coefficient	t	sig
	Unstandardized Coefficient		(Beta)		
	Beta	Std. Error			
Constant	-3.21	1.47			
LA	.88	.25	.29	3.6	.000
ATS	.35	.39	.07	.89	.38
I TL	-.39	.34	-0.87	-1.05	.29

*Note.*Criterion Variable: Academic Performance; ATS=Attitude Towards School; ITL= Interest To Learn; LA= Learner Autonomy.

A model summary of regression presented in Table 4.10 was also generated.

Table 4.10

Model Summary of Regression

Model	r	r^2	Adjusted r^2	Std error of estimate
1	.29	.09	.070	2.22

a) Predictors: (Constant) Interest to learn, Autonomy and Attitude towards school.

In addition to the model summary of regression, an ANOVA summary was also generated. The ANOVA summary was as presented in Table 4.11.

Table 4.11

ANOVA[a] Summary

Model	Sum of squares	df	Mean square	F	Sig
1 Regression	75.81	3	25.27	5.13	.002[b]
Residual	793.78	161	4.93		
Total	869.59	164			

a) Dependent variable: Academic performance

b) Predictors (Constant): interest to learn, autonomy and attitude towards school.

The predictive values for the predictor variables generated in the linear regression test were used to generate a predictive equation for predicting academic performance. Learner autonomy had a predictive coefficient of 0.29 which was significant, attitude towards school had a predictive coefficient of 0.07 which was also significant while interest to learn had a significant predictive coefficient of -0.09. The predictive equation which was generated from these co-efficient was as follows:

$\ddot{Y}$= -3.02+0.29A + 0.07 ATS – 0.09 ITL

Where: $\ddot{Y}$ = Predicted academic performance, A= Autonomy, ATS=Attitude Towards School, ITL = Interest To Learn.

The regression equation showed that academic performance can be significantly predicted using learner autonomy, attitude towards school and interest to learn. These findings did not support the null hypothesis which had been advanced that " learner

autonomy, attitude towards school and interest to learn do not jointly predict the secondary school students' academic performance. "Therefore, the null hypothesis was rejected. The predictive values indicated that leaner autonomy was the most powerful predictor of academic performance among the three predictor variables with a predictive value (B = 0.29). Interest to learn had low and inverse predictive value. According to the predictive values, academic performance increased by 0.29 points and 0.07 points for each standard deviation increase in autonomy and attitude towards school respectively. As indicated by the summary of the regression, 7% of the changes in academic performance of the participants could be attributed to the collective influence of these three variables. This implies that the three variables are good predictors of learners' academic performance.

The results of this study are similar to those of Mukhwana (2013), who looked at how learner autonomy, attitude towards school, and interest in learning can predict academic performance of form three students in Biology. Learner autonomy, attitude towards school, and interest in learning were found to be strong predictors of learners' success in Biology in that research. Given that Mukhwana's results were focused on a single subject's scores, the current study extends these findings by examining learners' overall performance across all subjects.

The results of this analysis were also consistent with previous findings obtained from research based on academic performance prediction using either two or three of the predictor variables. According to a study conducted among Nigerian secondary school students, learners' interest in learning and attitude towards their school are significant

predictors of academic achievement (Joe et al., 2014).Given that the study was done among learners who had already enrolled for an external national examination in Nigeria, the current study offered findings from participants who had not been enrolled for any national examination during the year the study was done. Consistency of the findings of these two studies imply that interest of learners towards learning and their attitude towards school are significant predictors of learners' performance in academics.

Another study by Ata et al., (2015) found that learner autonomy and interest in learning were important predictors of academic success among high school and university students. It was recorded that when autonomy and attitude towards school were used to predict student academic success, positive results were obtained (Hagger & Hamilton, 2018). In both of these experiments, one of the two predictor variables was found to be a significant predictor of academic success. This is in line with the findings of a recent study that found the three variables were important predictors of academic performance.

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CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter contains a summary of the findings, the conclusions and the recommendations for practical interventions and further research. The chapter is divided into four sections. Section one has the introduction, section two presents a summary of the findings. The third section has the conclusions of the research while the last section presents recommendations.

5.2 Summary of the Findings

This section summarizes the findings of the study and it's organized as per the objectives and the null hypothesis that was tested in relation to that objective. This study was done to explore three predictors of academic performance namely: learner autonomy, attitude towards school, and interest to learn. The target participants were 2019 form three students in Tseikuru Sub County of Kitui County. The study established the correlation between each predictor variable and academic performance. The study also looked at the joint role of the three predictor variables in predicting academic performance of the learners with the aim of generating an equation for predicting the academic performance of the secondary school students using the three variables. The study had four objectives. The first three objectives focused on the relationship between each predictor variable and academic performance. The fourth objective focused on prediction of academic performance using the three variables.

The first objective of the study was to establish the relationship between learner autonomy and students' academic performance. The results showed that there was a positive correlation between the two variables. The correlation was statistically significant. The null hypothesis which stated that there is no significant relationship between learner autonomy and academic performance was not supported.

The study's second objective was to measure the extent of relationship between attitude towards school and learners' academic performance. The results revealed that attitude towards school significantly correlated to learners' performance in academics. This implies that students who have a positive attitude towards their school register better performance in their academics compared to those who have a negative attitude towards their school. The null hypothesis that there is no significant relationship between attitude towards school and students' academic performance was not supported by these findings. Therefore, it was concluded that attitude towards school significantly relates to learners' academic performance.

The third objective was to find out how interest to learn relates to students' academic performance. In relation to this objective, a null hypothesis had been formulated that there is no significant relationship between interest to learn and learners' performance in academics. The results showed that there exists a strong and statistically significant positive correlation between interest to learn and academic performance scores. Based on these findings, it was held that interest to learn significantly relates to learners' academic performance.

The last objective aimed at generating a predictive equation for predicting academic performance of secondary school students using learner autonomy, attitude towards school, and interest to learn as the predictor variables. The predictive equation that was generated showed that learner autonomy and attitude towards school predicted academic performance positively while interest to learn predicted academic performance inversely. It was also noted that learner autonomy contributed the highest predictive weight compared to the other two variables. The three variables were found to be significant predictors of learners' academic performance.

This study's results were consistent with those of previous studies that looked at how academic performance relates to learner autonomy, attitude towards school, and interest in learning, as well as the role of the three predictor variables in predicting learners' academic performance. Learner autonomy, attitude towards school and interest to learn had been found to be positive correlates of academic performance in those previous studies. The three variables had also been established to be significant predictors of academic performance. The findings of the current study corroborate the findings of those existing studies.

The findings of this study deviated from the findings of some previous studies which had reported that there was no significant relationship between any of the predictor variables and academic performance. The findings of the current study did not corroborate the findings of the previous studies which established that learner autonomy, attitude towards school and interest to learn are not significant and positive correlates of learners' academic performance.

5.3 Conclusions

This section presents conclusions relating to the findings of this study. This study has two main conclusions.

From the findings of this study, it is concluded that learner autonomy, attitude towards school, and interest to learn are positive correlates of academic performance. Notably, interest to learn had the strongest correlation index while attitude towards school had the weakest correlation value. It was concluded that an increase in any of the variables may result to improved academic performance.

The second conclusion is that academic performance is predictable from learner autonomy, attitude towards school and interest to learn. Based on the study's findings, it was concluded that learner autonomy was the best predictor of academic performance among the three predictor variables.

5.4 Recommendations

This section contains recommendations drawn from the findings of the study. The recommendations are divided into two subsections. The first sub section presents recommendations for practical interventions that should be implemented in order to promote academic performance of the learners. The second sub section presents recommendations for further research.

5.4.1 Recommendations for Practical Intervention

This sub section recommends some practical interventions which if undertaken and implemented can promote learner autonomy, cultivate positive attitude of learners

towards school and arouse their interest in learning. This would eventually promote academic performance of the secondary school students.

i. Since learner autonomy was found to relate positively to academic performance, it is recommended that efforts should be made by teachers, students and parents to promote learner autonomy which would lead to enhanced academic performance of the learners in Kitui County.

ii. This study has established that attitude towards school is a positive correlate of academic performance. Therefore, it is recommended that teachers should ensure that their students develop positive attitude towards the school in order to promote their performance in academics.

iii. Learner autonomy and attitude towards school which are positive correlates of academic performance may be promoted by the parents. Therefore, it is recommended that parents should be engaged in the learning process to promote the learners' autonomy and cultivate their positive attitude towards the school. Promoted autonomy and positive attitude towards the school may impact positively on learners' academic performance.

iv. Since the findings of this study established that interest to learn relates positively to academic performance, it is recommended that teachers should arouse their learners' interest towards learning. Aroused interest towards learning may translate to improved academic performance.

v. The findings of this study have established that academic performance is predictable from learner autonomy, attitude towards school and interest to learn. Therefore, it is recommended that teachers, students and parents should

promote learner autonomy, attitude towards school, and interest to learn in order to make academic performance in Kitui County more predictable in future.

5.4.2 Recommendations for Further Research

This subsection presents recommendations for further research. The sub section highlights the key areas related to this study which have not been addressed in the current study.

i. This study looked at the relationship between attitude towards school and learners' academic performance. The study also focused on the role of attitude in predicting academic performance. The researcher recommends that further research can be done to explore the dimensions of attitude which have not been looked at. These dimensions include attitude towards teachers and attitude towards learning. Further research can also focus on how attitude towards a specific subject relates to performance in that particular subject. Research in these areas will provide more information on how attitude influences the performance of the secondary school students.

ii. This study did not investigate whether gender plays any role in mediating the relationship among the variables. Therefore, the researcher recommends that further research can be done to determine whether there are significant differences in expression of autonomy, attitude and interest to learn based on the gender of the participants. This research can provide answer to the question whether there

is any variable which is a better predictor of academic performance depending on gender of the participants.

iii. Learners' level of autonomy, attitude towards school and interest to learn may vary depending on the category of the secondary school. Kenyan public secondary schools are grouped into national schools, extra county schools, county schools, and day secondary schools. Admission into a particular category of school is determined by the total marks which one scores in KCPE. Schools in the national category admit learners with the highest marks while day secondary schools admit learners who have scored the lowest marks whereby most learners who are admitted in day secondary schools had scored below 250 marks out of possible 500 marks. This is a clear indication that learners in different categories of secondary schools have different academic abilities based on their performance in KCPE. This study was done among learners in county and sub county categories of schools which have the least academic ability based on the admission criteria of KCPE performance. Since the study variables may differ depending on academic ability, it is recommended that other researchers can do a study to find out how autonomy, attitude towards school and interest to learn of the secondary school students vary depending on the category of the school which the learner is enrolled in.

iv. The choice of the area of study was based on consistent low performance in KCSE for seven years consecutively. It is recommended that other studies can be done on both poorly performing and well performing sub counties within or outside Kitui County to yield data for comparison purposes.

v. This study looked at the relationship between interest to learn and learners' overall performance. The researcher recommends that future studies may focus on how interest to learn relates to performance in a particular subject.

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APPENDICES

Appendix A: Consent Form

Moses Muithya Mutinda
Department of Educational Psychology
Kenyatta University
P.O.BOX 43844,Nairobi.

Dear participant

I am pursuing Master of Education Degree at Kenyatta University. I intend to conduct a research on predictors of academic performance among secondary school students in Kitui County. The target participants are form three students in Tseikuru Sub County. Data will be collected using questionnaires which will be filled by the students. The information which you will provide will help to promote academic performance in Tseikuru Sub County.

Confidentiality will be upheld and there are no harms associated with participation in this research. Participation is voluntary and participants have a right to unconditionally withdraw from participation. All issues regarding this research should be communicated to the researcher using the above stated address. The results of this study will be shared among the participants. Thank you.

signature……..Date……`

Appendix B: Questionnaire for the Students

Section A: Instructions

This questionnaire is not an examination and it is meant to collect data to be used for the research purposes only. There are no right and wrong answers. The data collected with this questionnaire will be treated with utmost confidentiality. Please complete the entire questionnaire to the best of your knowledge.

The time set to complete this questionnaire is 40 minutes.

Section B: Background Information

Name of school ……..

Category of the school

Girls only boarding ( )

Co-educational boarding ( )

Co-educational day school ( )

Admission Number ……

Age ……..years

Gender male ( )

Female ( )

Section C

For each statement, tick one option which best describes your behavior as per the statement.

	Never	Rarely	Sometimes	Often	Always
1. I think I have the ability to study well on my own					
2. I use my free time to study on my own.					
3. I review what the teacher taught in the previous lesson before class					
4. I review what the teacher has taught after the class					
5. I keep record of my studies such as writing a review or keeping diary					
6. I reward myself when I progress well.					
7. I make self-examinations with examination papers chosen by myself.					
8. I attend out of class activities which promote learning					
9. In class, I take chance in learning activities					
10. I know my strength and weaknesses in studies.					

Section D

For each statement, Tick the response which most closely reflects your beliefs.

	Strongly Agree	Agree	Disagree	Strongly Disagree
1. I like school a lot				
2. School is boring				
3. I do poorly at school				
4. I don't really belong at school				
5. Staying at home is a waste of time				
6. I try hard at school				
7.I usually finish my homework				
8. Getting good grades is very important to me				
9. Sometimes I do extra work to improve my grades				

10. If you were to choose on your own between studying to get good grades on a test or going out with your friends, would you:

Definitely go out with friends ( )

Probably go out with friends ( )

Probably study ( )

Definitely study ( )

Section E

For each of the following statements, tick the response which mostly reflects your behavior

	Strongly Agree	Agree	Disagree	Strongly Disagree
1. I enjoy learning very much				
2.Learning is fun to me				
3.I think learning is a boring activity				
4. I can describe learning as a very interesting activity				
5. I think learning is a quite enjoyable activity				
6. I do not enjoy learning				
7. Learning activities do not hold my attention at all				

END

Appendix C: Pro Forma for Students' Examination Results

Name of the school ……..

Participants' admission number ……

Student's academic performance in Term Three, 2019

Total marks ……. Mean score ……

Class teacher's signature…….. Date ……

Researcher's signature……. Date…….

Appendix D: Research Permit

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **465207**

Date of Issue: **19/September/2019**

RESEARCH LICENSE

This is to Certify that Mr.. MOSES MUTINDA of Kenyatta University, has been licensed to conduct research in Kitui on the topic: AUTONOMY, ATTITUDE AND INTEREST TO LEARN AS PREDICTORS OF ACADEMIC PERFOMANCE AMONG SECONDARY SCHOOL STUDENTS IN KITUI COUNTY, KENYA. for the period ending : 19/September/2020.

License No: **NACOSTI/P/19/1540**

465207

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Verification QR Code

NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.

Appendix E: Kitui County Director of Education Authorization.

MINISTRY OF EDUCATION, SCIENCE & TECHNOLOGY
State Department for Basic Education

Telegrams "EDUCATION"
Kitui
Telephone: Kitui 22759
Fax :04444-22103
E-Mail :
cde.kitui@gmai.com

REPUBLIC OF KENYA

COUNTY EDUCATION OFFICE
KITUI COUNTY
P.O BOX 1557-90200
KITUI

When replying please quote;

Ref. No: KTIC/ED/Res/Vol. I/22/105 **Date: 27th January 2020**

Moses Mutihya Mutinda
Kenyatta University
P.O. Box 43844,00100
NAIROBI

RE: RESEARCH AUTHORIZATION

Following your application for authority to conduct a research on **"Autonomy, Attitude and Interest to learn as predictors of Academic Performance among Secondary School Students in Kitui County"**, I am pleased to inform you that permission has been granted to you to undertake research in Kitui County for the period ending **19th September 2020.**

You are advised to liaise with the respective Sub County Directors of Education before embarking on the exercise and a copy of the research report should be forwarded to this office.

COUNTY DIRECTOR OF EDUCATION
KITUI
P. O. Box 1557, KITUI.

S. Adano
County Director of Education
Kitui County

Appendix F: Kitui County Commissioner Authorization

THE PRESIDENCY
MINISTRY OF INTERIOR AND COORDINATION OF NATIONAL GOVERNMENT

Telegrams.....
E-mail: *cckitui@gmail.com*
When replying please quote Ref. and date

OFFICE OF THE
COUNTY COMMISSIONER
P.O.BOX 1-90200
KITUI.

K.C.603/III/59

27th January 2020

MOSES MUITHYA MUTINDA
NACOSTI/P/19/1540

RE: RESEARCH AUTHORIZATION

Reference is made to a letter from the National Commission for Science, Technology and Innovation Ref. No.465207 dated 19th September 2019 on the above matter.

You are hereby authorized to carry out a research on **"Autonomy, Attitude and interest to learn as predictors of Academic Performance among Secondary School Students"** in Tseikuru Sub County for a period ending 19th September 2020

SOLOMON RUTO
FOR: COUNTY COMMISSIONER
KITUI COUNTY

CC
DEPUTY COUNTY COMMISSIONER
TSEIKURU SUB COUNTY

APPENDIX G: Kitui County Governor Authorization

THE COUNTY GOVERNMENT OF KITUI

Cell Phone:
0702615888/0702615444
0731717100
Email: Kituicounty@kenya.go.ke

Tanathi Water Services Board
Building, Ground Floor
P.O BOX 33 – 90200
KITUI

Ministry of Education, ICT and Youth Development

Ref: CGoK/MEIYD/RES/1/5

Date : 27/1/2020

TO WHOM IT MAY CONCERN

RE: MOSES MUITHYA MUTINDA

The above named Masters student has approached this office for permission to carry out data collection in the county for his master's degree research.

He has the requisite documents from his supervisor at Kenyatta University.

This office has no objection to the request.

Please accord him the necessary assistance.

COUNTY GOVERNMENT OF KITUI
P. O. Box 33-90200. KITUI
27 JAN 2020
MINISTRY OF EDUCATION, ICT AND YOUTH DEVELOPMENT

Sammy B. Mwenga.
Deputy Director.
For: CEC Education.

Appendix H: Tseikuru Sub County Director of Education Authorization

MINISTRY OF EDUCATIONSCIENCE AND TECHNOLOGY

STATE DEPARTMENT OF EDUCATION

SUB COUNTY EDUCATION OFFICE

TSEIKURU SUB COUNTY

P.O BOX 352-90400

MWINGI

30/1/2020

MOSES MUITHYA MUTIINDA

KENYATTTA UNIVERSITY

PO BOX 43844-00100

NAIROBI.

RE: RESEARCH AUTHORIZATION

Your letter dated 30/1/2020 and other letters of authorization therein attached refers;

You are hereby granted authority to carry out research within tseikuru Sub County

John Musango

SCDE-Tseikuru

APPENDIX I: KCSE Performance for Sub Counties in Kitui County from 2010 to 2015

SUB COUNTY	2010	2011	2012	2013	2014	2015
1.Kisasi	5.95	6.47	5.46	5.44	5.63	5.72
2.Nzambani	4.36	4.52	5.09	5.03	4.89	5.57
3.Kitui west	5.45	5.44	4.82	5.07	5.73	5.57
4.Migwani	4.68	5.08	4.96	5.40	5.37	5.34
5.Kitui Central	5.39	5.33	5.36	5.15	5.13	5.29
7.Kyuso	5.62	5.32	5.01	4.81	4.98	5.02
8.Lower Yatta	4.91	5.07	4.38	4.52	4.98	4.99
9.Matinyani	4.57	5.13	3.39	4.93	5.18	4.97
10.Katulani	4.35	5.16	4.53	4.94	5.23	4.93
11.Ikutha	4.41	4.14	4.53	4.70	4.80	4.87
12.Mwingi Central	4.55	4.65	4.83	4.74	4.99	4.84
13.Mutomo	4.31	4.25	4.31	4.10	4.74	4.64
14.Tseikuru	**4.36**	**3.06**	**3.96**	**4.57**	**4.20**	**4.11**
15.Mwingi East	4.04	4.52	4.16	3.98	4.16	4.09
16. Mumoni	4.57	4.25	3.74	3.64	3.81	3.82
COUNTY M/S	**4.74**	**4.82**	**4.59**	**5.15**	**5.07**	**5.67**

Source: County Director of Education, Kitui County (2017).

APPENDIX J: Scoring Guideline for Attitude towards School Scale by Farnworth et al., (1991).

1. For items one to nine, assign point values as follows:

   Strongly Agree – 4

   Agree - 3

   Disagree - 2

   Strongly Disagree – 1
2. Reverse code items 2, 3. 4 and 5.
3. For item 10, assign point values as indicated:

   Definitely go out with friends - 1

   Probably go out with friends - 2

   Probably study - 3

   Definitely Study - 4
4. Add up all the point values and divide by the number of items which a respondent has answered.
5. The score should range between one and four with a higher score indicating more positive attitude towards school.

APPENDIX K: Scoring Guide for Interest to Learn Scale by Deci and Ryan (2000).

1. Reverse code items 3, 6 and 7.
2. Assign point values to the marked answer using the following guide

   Strongly Agree = 4

   Agree = 3

   Disagree = 2

   Strongly Disagree = 1
3. Sum up the point values and divide by the number of items a participant has responded to.
4. The score ranges between one and four with a higher value indicating higher interest towards learning.

APPENDIX L: Map of Kitui County