

**ABILITY BELIEFS, ACHIEVEMENT GOALS AND FEAR OF NEGATIVE
EVALUATION AS PREDICTORS OF ACADEMIC ACHIEVEMENT
AMONG FORM THREE STUDENTS IN MOMBASA COUNTY, KENYA**

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DECLARATION

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

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DEDICATION

I dedicate this work to the memory of my mother Margaret Mugeci who believed in me right from my early years and my father, Major (Rtd) Samuel Ndung'u, who always reminded me that the sky is the limit and ensured that I had all that I needed to explore my educational ambitions.

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LIST OF ABBREVIATIONS AND ACRONYMS

CDE:	County Director of Education
FNE:	Fear of Negative Evaluation
GPA:	Grade Point Average
IQ:	Intelligence Quotient
KCSE:	Kenya Certificate of Secondary Education
KNEC:	Kenya National Examination Council
NACOSTI:	National Commission for Science, Technology and Innovation
SAT:	Scholastic Assessment Test
SPSS:	Statistical Packages for the Social Sciences
USA:	United States of America
UNICEF:	United Nations Children's Fund

ABSTRACT

Low academic achievement remains a major concern among all stakeholders in Mombasa County. This study sought to explain academic underachievement from a self-worth protection perspective. Specifically, the study sought to establish the extent to which ability beliefs, achievement goals and fear of negative evaluation predict academic achievement. The study also sought to determine gender differences in ability beliefs, achievement goals, fear of negative evaluation and academic achievement. The study employed an *ex post facto* research design and was anchored by Covington's Self-worth Motivation Theory. The target population were form three students and class teachers in public secondary schools in Mombasa County. The sample comprised a total of 431 respondents; 421 students and 10 teachers selected using stratified, purposive and simple random sampling techniques. Questionnaires for students and semi-structured interview schedules for teachers were used. Students' academic records provided data on academic achievement. Questionnaires for students included items from the Implicit Theories of Intelligence Scale, the Achievement Goals Questionnaire - Revised and the Brief Fear of Negative Evaluation Scale. Both quantitative and qualitative data were collected. Quantitative data was analysed using descriptive and inferential statistics using SPSS. Linear regression analysis and t-tests were used to test hypotheses at $\alpha = 0.05$. Qualitative data was analysed thematically in line with the objectives of the study. Ability beliefs significantly predicted academic achievement. Entity beliefs significantly and negatively predicted academic achievement while incremental beliefs insignificantly and positively respectively predicted academic achievement. Achievement goals significantly predicted academic achievement with mastery and performance goals positively and negatively respectively predicting academic achievement. Fear of negative evaluation insignificantly and negatively predicted academic achievement. As a single model, ability beliefs, achievement goals and fear of negative evaluation significantly predicted academic achievement. Significant gender differences were found in performance goals and academic achievement. Qualitative analyses showed that students set their goals in line with overall schools' targets; goal monitoring was done by class teachers and parents; students feared the subsequent evaluation because previous results were publicly displayed and discussed and girls were at an elevated risk of undervaluing academics because of cultural socialisation. The study recommended that learning should be a more holistic process encompassing both performance mastery domains and that parents should not peg their children's overall worth solely on academic achievement. In the same line, diverse programs should be developed to ensure that students find worth in other domains that are also socially valued.

CHAPTER ONE

INTRODUCTION AND CONTEXTUALIZATION OF THE STUDY

1.1 Introduction

This chapter contextualises the study. It focuses on the background to the study, statement of the problem, purpose, objectives, research hypotheses and significance of the study, delimitations and limitations. Additionally, assumptions, theoretical and conceptual framework and operational definition of terms are examined.

1.2 Background to the Study

Poor academic achievement in school tests remains a major concern to stakeholders in education. Due to the high premium placed on academic achievement in society, evaluative situations often force learners into a zero-sum reward game where only a relative minority is rewarded while dampening the motivation and confidence for the relative majority (Liem, Ginns, Martin, Stone, & Herrett, 2012). Over the years, public secondary schools in Mombasa County have reported poor academic achievement. In 2012 and 2013, Mombasa County was ranked 39 out of 47 counties with a mean of 26.59 and 25.94 respectively in KCSE (Mombasa County Education Office, 2017). This poor achievement potentially threatens future human resources in the County. School dropout arising from poor academic achievement has also been associated with social deviance (UNICEF,

2006). Available research on academic underachievement in Kenya has cited teachers' characteristics, facilities and instructional materials (Gakure, Mukuria & Kithae, 2013; Mwangi & Nyagah, 2013) as reasons for poor academic achievement. However, it is likely that other reasons are responsible for poor academic achievement.

The extent to which students view their intelligence plays a central role in academic achievement. According to Dweck (2010), the extent to which individuals attribute their intelligence - either as fixed or innate, or that can be influenced through learning and effort varies from one person to another. Having an entity or incremental view about one's ability has implications for motivation and ultimately academic achievement. Various studies have reported strong associations between ability beliefs and outcomes directly related to academic achievement. For instance, a study in the USA by Miele, Son, and Metcalfe (2013) found a positive relationship between holding entity beliefs and lower ratings of comprehension while Stunz and Weiss (2009) found perceptions of ability to predict fear of evaluation. In the UK, Sheldrake, Mujtaba, and Reiss (2015) show that students' self-beliefs influence their GCSE mathematics grades. Research shows that implicit theories of ability influence students' goal orientations, their beliefs about what effort and failure means, the strategies they employ on academic tasks, and ultimately, their academic achievement (Blackwell, Trzesniewski, & Dweck, 2007).

Ability beliefs have also been found to be related to the learning strategies that learners use. For instance, in their study in Norway, Dahl, Bals, and Turi (2005) found that students' fixed orientations negatively and significantly predicted their use of elaboration and critical thinking strategies and metacognitive and self-regulation strategies. The finding implies that fixed beliefs are responsible for a set of behaviours that inhibit academic achievement. This is because evaluative situations in school play an important role in students' academic pursuits. Similarly, ability beliefs predict students' coping strategies in evaluative situations that directly influence academic achievement. For instance, a study in France by Doron, Stephane, Boiche, and Le Scaff (2009) found that incremental views of ability significantly and positively predicted active coping while entity beliefs positively predicted behavioural disengagement. The findings provide support for the assertion that exam-related coping is a function of students' beliefs about the nature of their academic ability. Studies in Asia corroborate findings from western countries. Law, Chan, and Sachs (2008) in their study on a sample of 417 Grade 5 and 420 Grade 6 Chinese elementary school children in Hong Kong found a strong positive correlation between constructivist beliefs and self-regulated learning strategies.

The kinds of goals that students adopt affect motivation and performance in evaluative situations and provide a framework within which students interpret and react to event. These lead to different patterns of affect, cognition and behaviour (Dweck & Legget, 1988). Research has distinguished between mastery goals, that

is, the goal to master, develop and improve ability and performance goals, that is, to demonstrate, to perform and to prove ability. Learners may adopt performance or mastery goals and each determines how they view ability and define success and failure (Alrakaf, Sainsbury, Rose, & Smith, 2014). According to Chan (2008), students who set learning goals tend to seek challenges and persist when they encounter difficulties. “They are more likely to seek appropriate help, use deeper cognitive processing strategies and generally approach cognitive tasks with confidence” (p 40). On the other hand, students who set performance goals are concerned with demonstrating their ability to others. Chan posits that such students focus on getting good test scores and grades or they may be concerned with winning and outsmarting others. To such students, what matters is the evaluation of others and not what they learn.

Empirical literature has established relationships between the mastery-approach goal and low academic achievement among students (Hulleman, Schrage, Bodmann, & Harackiewicz, 2010). The performance-approach goal has been found to lead to high academic achievement (Barron & Harackiewicz, 2003, as cited in Alrakaf *et al.*, 2014). However, a number of studies present contradictory perspectives which point to the fact that strong mastery goal orientation facilitates the development of cognitive skills necessary to increase academic achievement. For instance, Wolters (2004) found that mastery orientation was related to adaptive outcomes that included persistence, choice, and use of cognitive and metacognitive learning strategies. Contrastingly, according to Chan (2008) as cited in

VandeWalle, Cron, and Slocum Jr (2001), mastery goals significantly predict achievement in academic, non-academic and social/leadership areas. In a longitudinal research carried out on 239 students to investigate the influence of goal orientation on feedback seeking behaviour, the results indicated that there is a positive relationship between a learning goal orientation and feedback seeking and a negative relationship between a performance goal orientation and feedback seeking. It is evident that inconsistent findings concerning the extent and direction of influence of mastery-approach goals and performance-approach goals on performance in evaluative situations require further study, a task which the current study sought to achieve.

Achievement in school is a treasured outcome in our education system. For that reason, and in line with Covington's Theory of Achievement Motivation (1984), achievement in a domain of worth is equated to ability. Poor scores in school tests potentially threaten students' sense of self-worth. This cyclic process leads them to fear the next evaluative situation as it confirms their lack of ability in a socially desirable endeavour. Fear of negative evaluation hence is a cognitive strategy students employ when the need to self-protect arises in evaluative situations. Fear of negative evaluation is a problem that learners all over the world experience in their daily lives within educational institutions (Weeks, Heimberg, & Rodebaugh, 2008). Studies in the USA have looked at fear of negative evaluation from the self-worth protection perspective. In one such study, Major, Spencer, Schmader, Wolfe, and Crocker (1998), fearing evaluative situations deflects failure away

from students' attributions of ability. Similarly, Crocker, Sommers, and Luhtanen (2002) found significant increase and decrease in affect for participants who had staked their self-worth on being good at school. Fear of negative evaluation is therefore expected to impact on learners' motivation which is associated with poor academic achievement.

In Kenya, studies on the direct relationship between fear of negative evaluation and academic achievement are sparse. A growing body of research has focused on the extent to which learners seek to protect their sense of self-worth when they anticipate failure (Wawire, 2010); when faced by repeated failure (Otanga, 2016) and on exam anxiety as an indicator of reactions to the threat of self-worth loss in evaluative situations (Mukolwe, 2015). In one such study, Mukolwe found that examination anxiety significantly and negatively correlated with academic performance. It is highly probable that high anxiety is a threat to students' self-worth.

Research findings on the relationship between students' demographic characteristics and fear of negative evaluation remain inconclusive. While some studies have found differences in evaluative anxiety on the basis of gender (Al-Shuaibi, Hamdan-Mansour, & Azzeghaiby, 2014), the direction of such differences remains inconclusive. In Africa, research in the area of fear of negative evaluation is sparse and has focused on its relationship with teacher characteristics. For instance, Etuk, Etuk, Maria, Afangideh, and Asukwo (2013) found a positive

relationship between students' attitudes towards the teacher and subject on one hand and to evaluation on the other. From the foregoing, it appears that fear of negative evaluation in the academic domain is a risk factor for academic achievement. This study therefore sought to establish the extent to which ability beliefs, achievement goals and fear of negative evaluation in the academic domain predict academic achievement.

1.3 Statement of the Problem

Poor performance at KCSE continues to be of major concern in Mombasa County. The reasons for poor academic achievement in Mombasa County have been found to range from inadequate teachers, high pupil-teacher ratio, inadequate physical facilities and inadequate instructional materials (Mwendwa, 2011) to poor school leadership (Mwamuye, Mulambe, Mrope, & Cherutich, 2012). Poor academic achievement locks out many students from pursuing higher education or joining technical colleges resulting in low quality of entrepreneurship, industrialization and vocational capacity within the county. This is in addition to the risk of reduced economic opportunities and access to information. Therefore, there is need to investigate other perspectives that explain academic achievement.

Although poor academic achievement remains a global problem, research in Kenya from a self-worth perspective is scarce. Available studies have only focused on the extent to which examination anxiety predicts academic performance and self-worth protection strategies that learners are likely to adopt when anticipating failure. Additionally, studies in this area have been done in Western countries on

samples of college and university students and may not be generalizable to secondary school students in Kenya. This study therefore sought to find the extent to which perceived ability beliefs, achievement goals and fear of negative evaluation predict academic achievement among secondary school students in Mombasa County, Kenya.

1.3.1 Purpose of the Study

The purpose of this study was to investigate the extent to which learners' ability beliefs, achievement goals and fear of negative evaluation in the academic domain predict academic achievement among secondary school students in Mombasa County, Kenya. Specifically, the study sought to find out the extent to which mastery and performance goals and learners' entity and incremental beliefs about their academic ability predict academic achievement in the form of examination performance. Gender differences in ability beliefs, achievement goals and fear of negative evaluation and academic achievement were also studied.

1.3.2 Objectives of the Study

The study was guided by the need to:

- i. Determine the extent to which ability beliefs predict academic achievement among students in secondary schools in Mombasa County.
- ii. Establish the extent to which achievement goals predict academic achievement among students in secondary schools in Mombasa County.

- iii. Determine the extent to which fear of negative evaluation predicts academic achievement among secondary schools students Mombasa County.
- iv. Determine the predictive model of ability beliefs, achievement goals and fear of negative evaluation on academic achievement among secondary school students in Mombasa County.
- v. Establish gender differences in ability beliefs, achievement goals, fear of negative evaluation and academic achievement among secondary school students in Mombasa County.
- vi. Explore teachers' perspectives on students' ability beliefs, achievement goals, fear of negative evaluation and academic achievement.

1.3.3 Research Hypotheses

The study was guided by the following research hypotheses:

- H_{a1}: Ability beliefs significantly predict academic achievement among secondary school students in Mombasa County.
- H_{a2}: Achievement goals significantly predict academic achievement among secondary school students in Mombasa County.
- H_{a3}: Fear of negative evaluation significantly predicts academic achievement among secondary school students in Mombasa County.
- H_{a4}: The predictive model of ability beliefs, achievement goals and fear of negative evaluation on academic achievement is significant.

H_{a5}: There are significant gender differences in ability beliefs, achievement goals, fear of negative evaluation and academic achievement among secondary school students in Mombasa County.

1.4 Significance of the Study

Results from this study may add to an already existing body of knowledge and also act as a basis for further studies in the area of self-worth maintenance in relation to academic achievement. Findings will add to the literature on why students appraise evaluative situations as stressful. The findings of this study may also be of benefit to secondary school students as they may learn how their ability beliefs and achievement goals affect their fear of academic evaluation and ultimately their academic achievement. The results of this study may also inform teachers on how goal setting can increase academic performance. School administrators may also be able to use the study findings to institute measures geared towards improving students' ability beliefs which can serve to motivate learners and minimise the fear of academic evaluation. Policy makers may also benefit from these findings in the area of teacher training, through relevant instruction in the dynamics of student evaluation and curriculum administration.

1.5 Limitations and Delimitations of the Study

1.5.1 Limitations of the Study

First, the instruments were developed for respondents in developed countries and the process of adapting them may affect their reliability in other populations of study. This was addressed by modifying the instruments to suit the respondents in a developing country and through a pilot study. Secondly, the self-reporting nature of this study may have affected the accuracy of the findings as some respondents may have provided inaccurate information. However, assurances of confidentiality to respondents and use of multiple data collection instruments attempted to deal with accuracy of information provided. Finally, the purposive sample used in the study may have implications on the generalizability of study findings.

1.5.2 Delimitations of the Study

Many other factors have been associated with academic achievement. However, this study solely focused on the extent to which students' ability beliefs, achievement goals and fear of negative evaluation predict academic achievement among secondary school students in Mombasa County only. The study sample was limited to public secondary school students and teachers within the County and hence study findings may be generalized to public secondary school students in Mombasa County only. Public schools in Mombasa have a population that is representative to all strata of society as opposed to private schools which maybe

religious based or whose population is from high social economic class because of the prohibitive fees charged.

1.6 Assumptions of the Study

The study assumed that end of term tests give an objective assessment of learners' performances for the term. Secondly, the study assumed that students interpret classroom feedback in the form of test scores in ways that affirm their self-worth.

1.7 Theoretical and Conceptual Framework

1.7.1 Theoretical Framework

The Self-worth Theory of Achievement Motivation (Covington, 1984) which assumes that individuals desire to be accepted socially by achieving competitively anchored the study. In Covington's theory, one's ability leads to performance which increases one's self worth. It therefore follows that academic success is viewed as having ability and therefore competence while failure denotes incompetence (Covington, 1984). The theory therefore focuses on feelings of worth and worthlessness that arise from success and failure in evaluative situations respectively. In the school situation, whether students become successful at an activity in a valued domain, determines fluctuations in domain-specific self-esteem. It is hypothesised that since the academic domain is valued in school and society by extension, students' sense of esteem is anchored on academic achievement.

The theory also shows the direct and indirect influences of self-perceptions of ability and the expenditure of effort on a domain of one's sense of worth. Self-perceptions of high ability may imply worthiness if performance is assured. However, in the absence of performance in a domain of worth, perceptions of high ability do not help hence individuals identify ways to maintain self-esteem. The fear of competitive failure is hypothesised to result from this need to protect self-esteem especially if students' perceive their ability as unchangeable. One of the self-serving strategies that students may adopt to avoid failure is increased anxiety in evaluative situations. This allows them to externalise the cause of failure and therefore maintain self-esteem. According to Covington (1984), such strategies allow the student to "fail with honour" (p. 12). Unfortunately, the repeated use of such strategies is a temporary victory since it destroys the will to learn by reducing effort employed in the domain of interest. In the school situation, students lose motivation to learn resulting in poor academic achievement. It is therefore possible that learners who manifest fear of negative evaluation are motivated to protect their self-esteem.

The theory also emphasizes that individuals' self-worth is often connected to perceptions of high ability, so if they believe that ability is fixed, failure in a domain of worth is demeaning as it suggests lack of ability (Eggen & Kauchak, 2010). To protect their sense of self-worth, learners may therefore avoid situations that can reflect negatively on their intelligence. Thus, a negative relationship between fear of negative evaluation and academic achievement was expected. If

learners believe that ability is incremental via increased with effort, failure is a suggestion of the need for increased effort in the task. Such learners are more likely to use more effective strategies, including setting performance goals and their success is evidence that their ability is increasing.

This theory was selected for this study because it emphasizes students' motivational dynamics in academic achievement and has also been used in empirical studies across cultures. For instance, it supports the assertion that students will engage in domains in which their self-worth is enhanced and avoid those in which it is demeaned. It also predicts that learners who believe that success is an indicator of their ability that is malleable will adopt strategies to ensure success. Empirical support for this assertion is provided in studies done in the USA (Crocker & Park, 2004; Crocker, Luhtanen, Cooper, & Bouvrette, 2003).

In Kenya, Wawire (2010) used the theory to study self-handicapping and defensive pessimism as defense mechanisms employed by students when their self-worth was threatened by anticipated failure. Similarly, Otanga (2016) used the theory to establish the extent to which students disidentify to protect their self-worth in the context of repeated failure. The theory therefore informed the study on the links between achievement in a domain of worth and self-worth protection.

1.7.2 Conceptual Framework

The current study hypothesized that achievement goals are a product of the classroom setting. The types of goals adopted are those that result in reward in the

classroom, that is, good grades. Classrooms have a wide variety of rewards ranging from the internalized satisfaction of having done one's best which promotes mastery goals to public recognition or praise for doing better than others which reinforces performance goals. The classroom also, has negative reinforcers that include the threat of poor grades or public shaming for poor academic achievement. In the classroom where a few must gain points while the majority lose, achievement goals can be consequently summed up into overcoming other students and not mastering the subject matter. Such classrooms promote a performance approach to academic attainment. For such students who do not achieve as highly as their peers, the classroom presents an evaluative environment which is anxiety-provoking. Fear of negative evaluation is one way of dealing with threats to the self-arising out of the fear of ability being exposed as 'low' in tests. Because classroom competition has only a few winners and many losers, students who encounter failure link failure to their ability. This is because classrooms have socialised such students to tie their sense of worth to grades. For such students, effort investment leads to more failure and therefore acts as confirmation of their incompetence. Such students must therefore console themselves with not failing or if they must, then fail in ways that imply low ability. Such students are expected to endorse entity beliefs because they do not gain grades otherwise. The confirmation of incompetence that results from failure has also been associated with negative academic outcomes.

Therefore, the model presented in Figure 1.1 shows the interaction of factors hypothesised to predict academic achievement. The conceptual model shows that students' perceptions of ability, achievement goals and fear of negative evaluation predict academic achievement. Additionally, gender differences in ability beliefs, achievement goals and fear of negative evaluation are expected to explain differences in academic achievement.

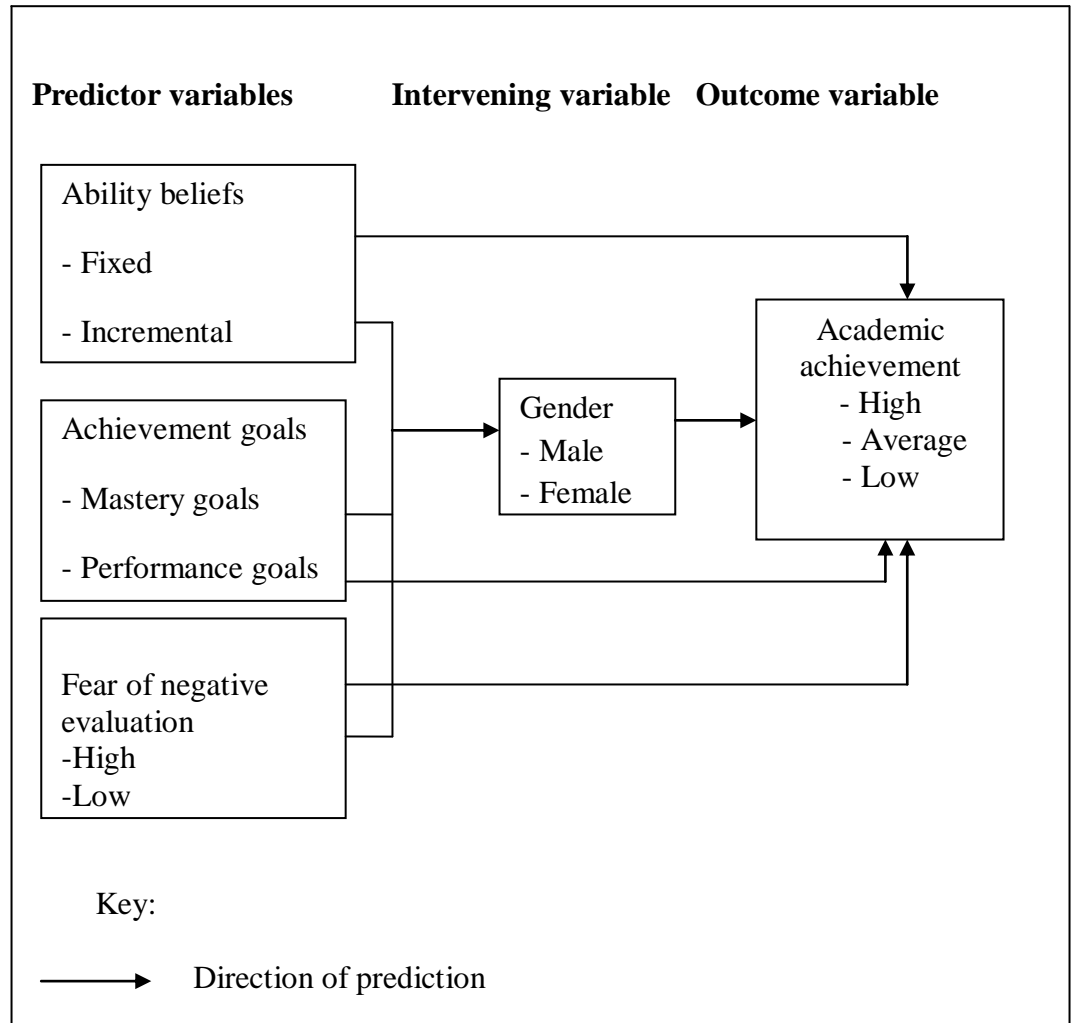


Figure 1.1 Model predicting academic achievement

1.8 Operational Definition of Terms

Ability beliefs: Students' self-judgment of their capabilities at tasks.

Academic achievement: Students' mean score in three consecutive term examinations.

Achievement goals: Students' beliefs concerning reasons why they approach and engage in academic tasks.

Fear of academic evaluation: Students' reluctance concerning sitting tests in school.

Fixed perception of ability: Students' beliefs that their performance in academics cannot improve through effort.

Incremental perception of ability: Students' beliefs that their performance in school can be improved over time.

Mastery goals: When students want to understand content of lessons more than they want to achieve grades

Performance goals: When students want to out-compete others for social comparison and get higher grades but not learn.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

This chapter reviews literature in the area of ability beliefs, achievement goals and fear of negative evaluation and the extent to which they predict academic achievement. The intervening role of gender is also discussed. The chapter ends with a summary of the literature reviewed.

2.2 Ability Beliefs and Academic Achievement

A body of research has shown that individuals' implicit beliefs about ability are significantly related to academic achievement (Olatunde, 2010). It has been confirmed in the literature that self-beliefs about ability directly influence academic achievement and also determine the extent to which students continue with specific academic pathways. One such study was done by Sheldrake et al. (2015) in England in a longitudinal study of students' intentions to study non-compulsory mathematics on a sample of 1085 students (434 males and 651 females) aged between 15 and 17. The students were surveyed at Years 10 and 12. Student questionnaires derived from validated measures were used. Students' self-beliefs of ability were found to significantly influence GCSE mathematics grades and their intended and actual mathematics subject-choices. Additionally, the degree of under-confidence and over-confidence related to the self-beliefs influenced academic performance.

Studies have also shown that students with incremental views of ability significantly perform better than students who hold fixed mindsets (Atwood, 2010; Dweck, 2010). Studies have found positive correlations between growth mindsets and academic achievement among Black and Hispanic students. Similar effects have also been found that among female students whose math grades and test scores appreciate similar to those of their male counterparts (Dweck, 2008, 2010). In a study on the influence of children's naive theories about intelligence on metacognitive judgement on a sample of 51 elementary school children in New York, Miele et al. (2013) found that the more strongly participants endorsed entity beliefs, the lower they rated their comprehension. In a study conducted among 27 third graders with mean age of 8.27 years and 24 fifth graders with mean age of 10.39 years, children in both grades who viewed their intelligence as fixed also rated their comprehension as low. The conclusion to be drawn is that beliefs about intelligence have important implications for students because they affect students' goals in school, their belief in the usefulness of effort and the way they explain their failures including the strategies they adopt when they encounter failure (Dweck & Master, 2009) and ultimately influence academic achievement.

Research findings on the relationship between ability beliefs and academic achievement vary depending on methodology used for the study. Studies employing mediation and structural equation modelling have consistently reported that students who believe that ability is incremental choose learning over performance goals and believe that effort investment will lead to positive academic

outcomes. In one such study, Stipek and Gralinski (1996) sought to explore associations among children's beliefs about intelligence and effort, goal orientations, self-reported learning strategies, and academic achievement. The study was done on a sample of 319 children (165 boys and 154 girls); 66 third graders, 119 fourth graders, 75 fifth graders, and 59 sixth graders. These children were enrolled in 32 schools serving predominantly poor and working-class, ethnically diverse families in three different school districts - two in a large, urban area in southern California and a third in a large, urban area in the Northeast. Results indicated that fixed ability perspectives correlated with the belief that performance is relatively stable. This set of beliefs was differentiated from the belief that effort has positive effects on intelligence and performance. Children's beliefs in intelligence as fixed and affecting performance was negatively associated with academic achievement.

A related study was done by Blackwell et al. (2007) exploring the role of implicit theories of intelligence in adolescents' mathematics achievement among 373 7th Graders in the USA. Findings indicate that students who held the belief that ability was incremental at entry to junior high school posted higher mathematics grades at the end of the second year of school controlling for the effect of mathematics achievement scores in lower levels of school. Further, Henderson and Dweck (1990) as cited in Blackwell et al. (2007) found that students who endorsed an incremental view scored significantly higher grades than those who endorsed more of an entity view in the first year of junior high school controlling for prior

achievement. These findings concur with findings of experimental research. For instance, Aronson, Fried, and Good (2002) sought to see if encouraging incrementalism could be used to affect students' actual academic engagement and achievement outside the laboratory. A total of 79 male and female undergraduate students (42 Black, 37 White) from Stanford University, USA were randomly assigned to one of the six conditions of the study, a 2 by 3 design yielded by crossing race (African American or Caucasian) with treatment (malleable pen pal, control pen pal, or non pen pal). Findings show that students in the incremental theory training group subsequently earned higher grades, controlling for SAT scores, than did their counterparts in either the multiple intelligence or the no treatment control groups.

Academic outcomes due to intelligence beliefs have been found to vary based on students' interpretation of effort in academic tasks. For example, students with a fixed mindset are unlikely to expend effort on academic tasks because of the belief that academic success should come naturally. For such students, hard work is an affirmation of their lack of ability in the tasks. Contrastingly, students with a growth mindset expend effort as a means of gaining new knowledge (Bivens, 2008; Dweck, 2010). This finding is supported by Miele et al. (2013) whose study among elementary school children in New York found out that the more strongly participants endorsed entity beliefs about intelligence, the less strongly they endorsed positive beliefs about the role of effort in achievement. Another study that provides similar findings was done by Stump, Husman, and Corby (2014)

among a sample of 377 engineering students aged 18-41 years at a large public university in the Southwestern United States. The Implicit Theories of Intelligence Scale (Dweck, 2000) was used to measure ability beliefs. Stump et al. reported a significant positive correlation between the strength of students' incremental beliefs and reported knowledge-building behaviours as well as collaboration. Contrastingly, the strength of their entity beliefs was negatively related to their reported knowledge-building behaviours and collaboration. Interestingly, neither of the two intelligence beliefs was found to be significantly related to students' course grades. This perspective blends in with the work of Yeager and Dweck (2012) who connect the study of mindsets to resilience which is central to achievement. They argue that, students who believe that intellectual abilities are qualities that can be developed, show higher achievement across challenging school transitions and greater completion rates in challenging maths courses. Support for this perspective is provided by Paunesku, Yeager, Romero and Walton (2012) as cited in Yeager and Dweck (2012) in an experimental study where the experimental group was exposed to an incremental theory message. At the end of the semester, only 9% of students had withdrawn from the developmental math class compared to 20% in the control group. Additionally, those who remained in the treatment group scored higher marks and were less likely to fail. Put together, these findings underscore the positive relationship between incremental beliefs and academic achievement.

Studies in Asia have reported strong relationships between students' ability beliefs and academic achievement. For instance, a study by Velo and Aijaz (2013) among undergraduate students enrolled during the second semester of 2008/2009 in University Putar Malaysia found positive relationships among students' mathematical beliefs, self-regulated learning and mathematics achievement. The result presented strong evidence that change in mathematics ability beliefs - from low to high significantly increased mathematics achievement. This study used the self-regulated learning questionnaire (Pintrich, Smith, Garcia, & McKeachie, 1991) to assess the impact of students' mathematical beliefs and self-regulated learning strategies on school achievement. Similar to the current study, Velo and Aijaz also used students' record of mathematics achievement in terms of GPA of courses done during the previous semester. It is important to test the findings of this study in different cultural milieu to corroborate findings of earlier studies.

Another line of literature points to the importance of subject specific self-concept in academic achievement. This line of argument presupposes that a student may have differing views of their ability in two different subjects. For example, they may have a fixed view of their ability in one subject, but hold an entity belief in another subject. For instance, Beghetto and Baxter (2012) in a study that explored students' beliefs in elementary school 276 participants from 12 elementary schools in the Pacific Northwest, students naive certainty beliefs, that is, the belief that science knowledge is stable, fixed and represented by correct answers, were negatively related to teachers' ratings of students' understanding. Additionally,

students' naive math certainty beliefs were found to have a negative relationship with students' perceived mathematics competence, and intellectual risk taking; whereas naive math certainty beliefs were found to have positive relationship with perceived mathematics competence, but negatively predicted teachers' ratings of mathematical understanding. These findings seem to corroborate literature that has found a negative influence of naive certainty beliefs on students' motivational beliefs and consequently academic achievement. Further, Tempelaar et al. (2014), as cited in Verniers and Martinot (2015) suggest another perspective, that students hold both entity and incremental views of ability concurrently that are activated depending on the context. The two are being presented as "unipolar constructs".

Much effort has been invested in studies on the effect of students' beliefs about their intelligence using samples from Asia (Pillay, Purdie, & Boulton-Lewis, 2000). However, such studies using samples from the African continent remain scarce and disjointed. Research in Kenya on the relationship between ability beliefs and academic achievement remains limited. Related research points to a link between attributions and academic achievement. For instance, Onduso (2010) carried out a study to compare teachers' and students' attributions regarding mathematics achievements in a Kenyan secondary school. The sample for the study comprised 140 form four students (80 girls and 60 boys) and Mathematics teachers from Senior Chief Koinange high school in Kiambu District. Using a causal-comparative design, the study found that students attributed their success to

hard work, interest, effort and ability, and failure to misunderstanding of questions, teachers' effort, confidence and test difficulty. This points to the fact that students attributed success internally and failure to external events.

Otieno (2015) explored implicit intelligence theory among a sample of secondary school students. Qualitative methods were used in the study to enable the researcher to develop an interpretative understanding of the extent of incremental and entity beliefs amongst the participating students. The participants were drawn from a faith based private secondary school in Kenya. A total of 26 students of mixed attainment levels spread across the four levels participated in the study. Of the 26 participants, 12 were female. Findings of this study revealed that most Kenyan secondary school learners displayed maladaptive motivational achievement traits symbolized by debilitation or pulling out when faced with a challenging task. Further, most learners held inherent conceptions that their mathematics intelligence is inborn and unchangeable. In a related study, Mucherah, Felicia, Kyle, and Travis (2010) examined the relationship between students' actual performance and their perceived self-concept among 1990 high school students from two same sex boarding schools - one for boys and the other for girls whose ages ranged from 14-18 years ($M = 16.5$ years) in Kenya. A correlational analysis was conducted between academic performance variables and self-concept. It was reported that students' actual performance in Math and English were significantly correlated with their self-concept perception in math and verbal ability. Additionally, male students reported higher self-efficacy than

their female counterparts. The study findings further indicated that self-efficacy positively predicted mathematics performance.

There are contradictory results on the role of entity and incremental beliefs on academic achievement. While majority of studies show positive and significant relationships between students' ability beliefs and academic achievement, a narrow body of research finds no relationship (Stump et al., 2014). Secondly, most of the studies have been carried out in Western countries thus severely limiting the extent to which the findings can be generalized to samples of secondary students in Africa. Additionally, research in the area of ability beliefs and academic achievement is scarce. Therefore, this study sought to establish the extent to which ability beliefs predict academic achievement among secondary school students in Mombasa County.

2.3 Students Academic Goal Orientations and Academic Achievement

Goal orientation theorists have engaged in attempts to determine the type of goals that are most productive for students and what types of goals result in the cognitive strategies, affective responses and behaviours which lead to success (Koller, 2000). There are two main categories of academic goals, that is, mastery goals and accomplishment/performance goals. While mastery goals reflect a need for achievement, focus on learning, understanding, and developing ability or competence, performance goals focus on demonstrating one's ability or competence and being judged as capable by others (Schunk, Pintrich, & Meece,

2008). The focus of learners with mastery goals is more on academic activities rather than their self-presentation more than their peers. To such learners, hindrances and underperformance are unthreatening; instead, they view them as prospects for getting better and additionally enhance their competence. However, the major concern of performance-oriented learners is on their self-presentation that is, having the better grades than peers. For such students, underperformance is extremely intimidating and insinuates incompetence (Elliot & Dweck, 1988).

The relationship between general goal adoption and academic achievement has been established in the literature. In a study done by Church, Elliot, and Gable (2001) on a sample of 208 undergraduates (119 males and 89 females) enrolled in the Workshop Chemistry Program in the USA, hierarchical linear modelling showed that harsh evaluation positively predicted performance-avoidance goals while it negatively predicted mastery goals. However, findings on the relationship between achievement goals and academic achievement are contradictory. In another study by Elliot, Shell, Henry, and Maier (2005) chi-square analysis of participants achievement goal reports and achievement goal conditions was significant. The first experiment involved a total of 101 high school students, 57 male and 44 female aged from 15 and 21 with a mean age of 17.31 years. The one-way between-participants factorial design experiment was conducted in groups of 10-30 participants. In the second experiment, 36 participants were selected including 15 male and 21 female high school students aged between 16 and 20 with a mean age of 16.97. In both experiments, participants' achievement goals

predicted academic achievement. The two experiments provide robust support for the assertion that achievement goals predict academic achievement. The current study sought to extend findings of experimental research using a correlational research design in a different cultural context.

On the one hand, some research reports a positive relationship between mastery goals and academic performance. For instance, Grant and Dweck (2003) in Study 1 of a five-part study of achievement goals among a sample of 451 students from Columbia University, USA, found out that learning goals predicted higher achievement in the face of challenge among others while performance goals predicted poorer performance. Similar findings were reported by Dupeyrat and Marine (2005) on a sample of 76 French adult students (45 women and 31 men) enrolled in a one year program who deliberately chose to face the challenge of returning to school. Mastery goal orientation showed high and positive correlations with academic achievement. Mastery goals also positively and significantly predicted academic achievement. However, the direct effect of mastery goals on achievement was not significant after controlling for effort. These findings suggest that effort expenditure mediates the relationship between mastery goals and academic achievement. These findings are consistent with Dweck's prediction that seeking competence improvement that is, mastery goals, positively impacts learning outcomes while striving to demonstrate competence, that is, performance goals, negatively influence learning outcomes.

Related to the above findings, students who endorse mastery goals have also been found to report higher levels of interest than those who did not endorse mastery goals (Harackiewicz, Barron, Elliot, Carter, & Lehto, 1997). This was reported in their study among 311 undergraduates (112 men and 199 women) at a large university in the USA. Further, Harackiewicz, Barron, Tauer, and Elliot (2002) seem to suggest that mastery goals are more important in the short-term by increasing interest. Contrasting findings were presented by Dompnier, Darnon, and Butera (2009). Two hundred sixty seven first-year psychology students completed a mastery-goal scale in a standard format, with social desirability instructions and social-utility instructions. Participants' grades on academic exams were recorded later in the semester. Data were collected during a year-long regular social psychology class. Findings indicate that an endorsement of mastery goals did not significantly predict performance. However, the interaction between participants' endorsement of mastery goals and the perception of these goals' social desirability significantly predicted performance. Findings show that as participants' perception of mastery goals' social desirability decreased, the relationship between mastery goals and performance increased. Put together, findings of Dompnier et al. indicate that the relationship between mastery goals and performance depends on the reason why students endorse mastery goals. This relationship was reduced by the increase of perceived social desirability of mastery goals, and strengthened by the increase of perceived social utility of these goals.

Elliot and McGregor (1999) provide an interesting perspective to the relationship between mastery goals and academic achievement. Their study on test anxiety and motivation was done among a sample of 150 undergraduates (68 men and 82 women) enrolled in an introductory level psychology class at the University of Rochester, USA. Participants' verbal and math SAT scores were summed to form a total Scholastic Aptitude Test (SAT) score index. Achievement goals were measured using Elliot and Church's (1997) Achievement Goal Questionnaire while examination performance was measured using an exam consisting of 50 questions. Performance goals were positively related to examination performance in the short term but mastery goals were positively related to examination performance in the long term. Additionally, some research seems to show that mastery goals negatively predict academic achievement. In one such study, Harackiewicz et al. (2002) found a main effect of mastery goals, indicating that students who endorsed mastery goals in their introductory psychology class attained lower GPA in the semester of study.

On the other hand, research has found a positive relationship between performance goals and academic achievement. For instance, Elliott, McGregor, and Gable's (1999) study of achievement goals, study strategies and examination performance among a sample of 164 undergraduates enrolled at a northeastern university in the USA. The mean age of participants was 19.96 years old with a range of 17 to 40. An exam-specific Achievement Goals Questionnaire by Elliot and Church (1997) was given two weeks before the mid-term exam. Exam performance was measured

by an exam consisting multiple choice, short answer and essay questions totalling 100 marks. Exam scores were obtained from the course professor. Findings show that performance goals positively predicted examination performance. Similarly, Elliot and McGregor (2001) in a study on a sample of 182 undergraduates in an introductory level psychology class (65 males and 117 females) found that performance goals significantly predicted examination performance. The study used the Achievement Goals Questionnaire (Elliot, 1999; Elliot & Church, 1997, as cited in Elliot & MacGregor, 2001) a version of which the current study used.

Longitudinal research corroborates the findings. In a longitudinal study by Harackiewicz et al. (2002) on participants from the Harackiewicz's (2000) cohort who had taken Introductory Psychology as freshmen, students who had adopted performance-approach goals scored higher in their introductory psychology course. Elliot et al. (2005) provide experimental support for the findings in their experimental study that examined the effect of achievement goals on performance attainment and the moderating role of performance contingencies. Their study was carried out among 101 high school students (57 male and 44 female) aged between 15 and 21 with a mean of 17.31 in Germany using a one-way between-participants factorial design with achievement goal (performance-approach vs. performance-avoidance vs. mastery) as the independent variable and gender and grade point average as covariates. Achievement goal manipulation was based on that used by Elliot and Harackiewicz (1996) while the experimental task was the math subtest of the Intelligence Structure Test (IST) 2000 (Amthauer, Brocke, Liepmann, &

Beauducel, 1999, as cited in Elliot et al., 2005). Findings show a significant main effect for achievement goal condition. Participants who endorsed performance-avoidance goals performed worse than those who endorsed performance-approach and mastery goals.

Similar results were reported by Harackiewicz, Barron, Elliot, Tauer, and Carter (2000). The study that examined both the short-term and long-term consequences of students' achievement goals in an introductory psychology course among a sample of 648 introductory psychology students (218 men and 430 women) at a large Midwestern university in the USA. Students' final course grades were obtained from departmental records. Students' grades were determined by their performance on multiple-choice exams, and grades were assigned according to normative curves recommended by the Psychology Department. Findings show a significant main effect for performance goals. Students who adopted performance goals scored higher than those who did not endorse performance goals.

In a related study, Alrakaf et al. (2014) studied the relationship between achievement goals and academic achievement among 209 undergraduate students (122 female and 78 male) with a mean age of 21.4 years enrolled in the 4-year Bachelor of Pharmacy degree at the Faculty of Pharmacy, University of Sydney. The Achievement Goals Questionnaire (Elliot & MacGregor, 2001) was used. Findings show that among first-year students, higher scores on performance-approach goals were associated with higher grades. In the same year, adoption of

performance-avoidance goals significantly correlated with lower grades. Among third-year students, adoption of mastery-avoidance goals significantly correlated with lower grades. These findings seem to suggest that class level mediates the relationship between achievement goals and academic achievement. Another related study was done on a sample of 49 4th year psychology students (35 women and 13 men - one student did not report his/her sex) with a mean age of 24.8 (SD = 5.16) at the University of Geneva by Darnon, Butera, Mugny, and Hulleman (2009). Participants responded to Elliot and McGregor's (2001) Achievement Goals Questionnaire, validated in French by Darnon and Butera (2005) while exam performance was measured using the regular social psychology exam. The study revealed that while performance-approach goals positively predicted examination performance, performance-avoidance goals negatively predicted examination performance.

Literature indicates that the relationship between performance goals and academic achievement is mediated by test anxiety. Elliot and McGregor (1999) found performance-avoidance goals to negatively and significantly predict examination performance while performance approach goals were positively related. State test anxiety yielded a significant relationship with performance-avoidance goals meaning that individuals who endorsed performance-avoidance goals also reported higher anxiety. Contrastingly, performance-approach and mastery goals were not related to state test anxiety. Mediation analyses show that participants experiencing higher anxiety performed worse on the examination while the direct

relationship between performance-approach goals and mastery goals showed little change when state test anxiety was introduced to the equation. Similarly, fear of failure has been found to positively and significantly mediate the relationship between performance goals and academic performance (Elliot & McGregor, 2001).

Research has also reported mixed findings on the relationship between achievement goals and academic achievement. Goraya and Hassan (2012) provide such findings. In a study that explored the relationship between achievement goals and perceived competence and academic achievement among 62 students from a public university in Pakistan comprising 17 high, 33 average and 12 low achievers aged between 20 and 24 years, it was found that high achievers significantly scored high on performance approach goals and mastery goals compared to average and low achievers. Academic achievement was positively correlated with approach orientation, and performance-approach goal was identified as the strongest predictor of GPA. The study utilized the Achievement Goals Questionnaire to measure achievement goals, a measure that was also used in the current study.

In Experiment 1 of 3 of an experimental study, Elliot et al. (2005) examined the effect of achievement goals on performance attainment and the moderating role of performance contingencies among 101 (57 male and 44 female) high school students in Germany aged between 15 and 21 with a mean age of 17.31. A one-way between-participants factorial design was used with achievement goal

(performance-approach vs. performance-avoidance vs. mastery) as the independent variable and gender and grade point average as covariates. Task performance served as the dependent measure. Findings show no significant differences in academic achievement between participants who endorsed performance-approach and mastery goals.

Research in Africa on the link between achievement goals and academic achievement is not as robust as it is outside the continent. One such study is by Ramnarain (2013) in South Africa on the achievement goal orientation of disadvantaged Black physical sciences students that attempted to identify the achievement goal orientation of grade 12 Physical Sciences students from disadvantaged communities. Using a mixed methods design involving first a quantitative survey of 300 students from 6 township schools using the Achievement Goals Questionnaire (Vedder-Weiss & Fortus, 2010, in Ramnarain, 2013) and interviews with 12 students, the survey revealed that disadvantaged Black students have a much stronger performance goal orientation in comparison to a mastery goal orientation. This suggests that students are strongly motivated by achieving good marks in assessment tasks and getting recognition for performing better than their peers. Interviews done with 12 students revealed a strong bias towards performance goals. In contrast, the much lower mean score for the mastery goal orientation shows that students' achievement goal is weakly driven by the intrinsic value of learning science, namely the development of conceptual understanding in science, and science process skills.

Another study by Ileri (2015) sought to investigate the relationships among academic identity status, achievement goal orientation, and academic achievement using an explanatory sequential mixed methods design. The sample comprised 390 students from 10 public secondary schools in Mbeere South Sub-county, Kenya. The Achievement Goal Orientation Questionnaire (Elliot et al., 2011, in Ileri, 2015) was used to measure achievement goals while academic achievement was inferred from students' examination grades. The study established a significant positive correlation between approach achievement goal orientation and academic achievement and a significant negative correlation between avoidance achievement goal orientation and academic achievement. Ileri adopted the trichotomous model (Elliot & Church, 1997) by partitioning performance goals into performance approach goals (focus on being judged favourably by others, outperforming others, demonstrating ability or competence) and performance avoidance goals (focus on avoiding demonstrating low ability or incompetence). However, the current study adopted the dichotomous framework, namely mastery and performance approach to assess their influence on public secondary school academic achievement in Mombasa County, Kenya.

Another perspective in the body of research focuses on the multiple goal perspective in which both mastery and performance goals are beneficial. In their experimental study on a sample of 166 undergraduates (79 men and 87 women) in an introductory psychology class in the USA, Barron and Harackiewicz (2001) found out that participants endorsing higher levels of mastery goals had higher

interest, enjoyment and inclination in mathematics. They spent more time looking at additional information about a new mathematics technique during their free-choice period, had higher level of interest and desire to want to learn about mental math problems. Contrastingly, a nearly significant main effect of performance goals showed that participants who endorsed performance goals completed more problems than those who had lower levels. In a related study among a sample of 205 college students (140 females and 65 males) at the University of Wisconsin-Madison, Barron and Harackiewicz (2003), main effects for both mastery and work avoidance goals were found for interest. Students who reported higher levels of mastery goals at the beginning of the semester were more likely to report higher interest at the end of the semester while those who reported work avoidance goals at the beginning of the semester were less likely to report interest at the end. Interestingly, students who adopted higher performance goals posted higher grades. The study by Barron and Harackiewicz sought to extend findings of previous studies on the relationship between performance goals and academic achievement by testing college students in a different classroom environment, which the current study also sought to achieve.

The goal of the current study was to assess the extent to which students' academic achievements in public secondary schools are predicted by their academic goal orientations. More specifically, this study sought to investigate the extent to which mastery and performance goal orientations predict students' overall academic achievement. This was necessitated by the fact that available studies were carried

out among students in university and in developed countries. The scarcity of research in Africa also makes it difficult to generalize such findings. It was therefore important to determine the extent to which academic goal orientation predicts academic achievement of secondary school students in Mombasa County.

2.4 Fear of Negative Evaluation and Academic Achievement

Students' sense of self-worth is anchored on performance in the academic domain. Poor scores in tests can potentially threaten students' self-worth by affecting academic self-esteem and create a need to self-protect (Major et al., 1998). From the perspective of self-worth theory, students will fear evaluation to shield themselves from the expected negative effects of social devaluation due to poor academic achievement. Fearing evaluative tasks therefore deflects failure away from their perceptions of ability. It therefore follows that fear of negative evaluation will impede students' performance via one or more pathways, not least risk-taking. One such study that showed the relationship between fear of receiving negative criticism and academic risk taking was done by Cetin, Ilhan, and Yilmaz (2014). The study used a canonical correlation analysis among 215 students (122 female and 93 male) studying Primary School Teaching at Dicle University, Turkey during the spring semester of the 2011-2012 academic year. The study employed the Brief Fear of Negative Evaluation Scale (Leary, 1983, in Cetin *et al.*, 2014) and adapted into Turkish by Çetin, Doğan, and Sapmaz (2010) to measure fear of negative evaluation. The scale was based on a 5-point Likert type scale

whose original form contained 12 items. Significant relationships were found between fear of receiving negative criticism and academic risk taking. Unlike the current study which used the Brief Fear of Negative Evaluation Scale-II (Carleton, Collimore, & Asmundson, 2007), Ilhan and Yilmaz employed the Brief Fear of Negative Evaluation Scale (Leary, 1983) to measure fear of negative evaluation. A related survey study was carried out by Yokus (2013) among 82 music teachers (54.90% female and 45.10% male) who were undergraduate students in the Faculty of Education in Gaziosmanpasa University, Turkey, during the 2010-2011 academic year. The respondents ranged in age from 17 to 28 years old. This study was designed to investigate whether there was a relationship between Fear of Negative Evaluation and musical instrument achievements of music teacher candidates and to determine whether various variables affected the relationship between FNE and musical instrument achievements of music teacher candidates. The Brief Fear of Negative Evaluation Scale (BFNE) (Leary, 1983, in Yokus, 2013) and adapted into Turkish by Cetin, Doğan and Sapmaz (2010) was used to measure Fear of Negative Evaluation levels of teacher candidates. Yokus reported a statistically significant relationship between fear of negative evaluation level and musical instrument achievement. Fear of negative evaluation accounted for a massive 54% variance in musical instrument achievement. In a related study, Sevimli (2009) as cited in Yokus (2013) found a positive relationship between fear of negative evaluation and general achievement controlling for exam anxiety.

One way that variations in one's evaluation of self-worth can be explained is by its influence on affect. If being a "worthy" student on the basis of one's performance (equated to ability) is a goal for any student, then affective reactions to events in the academic domain should be stronger the more the student's self-esteem is anchored in the academic domain. One such study was done among 32 students (12 men, 20 women) applying to master's and doctoral programs at a university in the USA by Crocker et al. (2002). The study involved recording both pre and post-test scores on contingency of self-worth measures using a scale developed for this study. The study found positive affect to increase in response to acceptances from graduate schools and fall in response to rejections. Similarly, the more participants had staked their self-worth on being good at school, the greater was the increase and decrease in affect in response to success and failure respectively. The affective consequences thus act as a reward for behaviour. Therefore, positive evaluations increase the desire to pursue a goal and invest effort while negative feedback decreases goal commitment and increases the likelihood of fearing the subsequent task which is directly linked to poor academic achievement. Hence, anxiety of negative evaluation from others leads individuals to doubt their own talent and ability. The import of this is that fear of negative evaluation has implications for students' behaviours during the teaching-learning process. Such behaviours may include fear of failure, decrease in self-esteem and academic achievement and increase in performance goal orientation and exam anxiety (Dinnel et al., 2002;

Kocovski & Endler, 2000; McKinney, 2003; VandeWalle, 1997, as cited in Cetin et al. (2014).

Related studies in Kenya show a relationship between learners' feelings of worth and the strategies they adopt to deflect failure away before it happens. Wawire (2010) carried out a correlation and exploratory study of self-handicapping and defensive pessimism among 400 form four students in Nairobi County. The average age of respondents was 17 years. Both stratified and simple random sampling methods were used to arrive at the sample size. Findings indicate that self-handicapping was predicted by ego orientation, stability of self-concept and entity beliefs among others. The study also demonstrated that evaluation situations threaten self-esteem and the use of cognitive strategies was inversely related to academic outcomes.

Mukolwe (2015) conducted a study to establish relationships between exams anxiety and correlated variables and academic performance among 359 form four students (203 boys and 156 girls) in public secondary schools in Khwisero Sub-county, Kenya. The study adopted a correlational research design. Exams anxiety significantly and negatively related to academic performance. Mukolwe's study confirms the important role of evaluative situations in domain-specific self-worth evaluation which was also of major importance in the current study. Other studies have found that failure in academics leads students to discount and devalue academic outcomes to protect their self-worth. Otanga (2016) carried out a study

to establish the extent to which academic achievement, academic self-esteem, and causal attributions predict academic disidentification among 449 form three students (206 male and 243 female) from 12 secondary schools in Mombasa County, Kenya. Both correlational and exploratory designs were employed. The study found academic self-esteem to positively relate to academic achievement and negatively relate to both discounting and devaluing. Academic achievement negatively predicted both discounting and devaluing. Stable attributions significantly positively predicted discounting. Academic self-esteem partially mediated the relationship between academic achievement and devaluing. Academic self-esteem partially mediated the relationship between attributions and both discounting and devaluing. Building into the current study, the findings by Otanga show the central role of success in academics in students' self-worth protection. Students who had low scores and those who reported stable attributions were more likely to discount and devalue outcomes. The current study sought to build on that finding by focusing on fear of negative evaluation in academics in relation to academic achievement.

In line with Wawire (2010) and Otanga (2016) and working from a self-worth perspective, this study therefore hypothesized that fear of negative evaluation is a cognitive strategy employed by learners when failure is anticipated which, however is self-defeating as it leads to poor academic achievement. Aside from extending previous findings, the current study sought to establish how fear of

negative evaluation predicts academic achievement controlling for achievement goals and ability beliefs.

2.5 Ability Beliefs, Achievement Goals and Fear of Negative Evaluation on Academic Achievement

Research has attempted to explain the interrelationships between ability beliefs, achievement goals and fear of negative evaluation. Empirical research has shown that depending on students' ability beliefs, poor academic achievement may make students who believe that their ability is fixed to invest fewer resources in their study tasks irrespective of how anxious they feel about their performance. In their study, Cury, Da Fonseca, Zahn, and Elliot (2006) found that students who believed that academic tasks measured their ability were more likely to worry about their future performance. Specifically, implicit theories of ability directly predicted performance attainment. Similarly, Cury, Biddle, Sarrazin, and Famose (1997) carried out an experimental study among 156 pupils aged 13-15 years in France. The main objective of this study was to test the predictive value of achievement goals, in combination with perceived ability, on the time in which the individual prepares for a test. In Experiment 1 of 2, a 2 x 2 design of achievement goal (task involvement, ego involvement) x perceived ability (high, low) was used. Dependent variables consisted of the time devoted to prepare for the test (investment in learning), the perception of situationally induced motivational goals, attributed effort during test preparation, and the importance given to task

accomplishment. Dispositional task and ego achievement goals were assessed by the Perception of Success in Sport Questionnaire (PSSQ) developed by Durand, Cury, Sarrazin, and Famose (1996) as cited in Cury et al. The Specific Perceived Ability Questionnaire (SPAQ), developed by Famose, Sarrazin, and Cury (1994), as cited in Cury et al. was used to assess perceived ability level in a particular sporting activity and investment in learning was measured by recording the time taken by pupils to prepare for the test without the pupils' knowledge. The study found out that students who were ego-involved with low perceived ability had a weaker investment in the training situation than those ego-involved with high perceived ability, or those task-involved regardless of their perceived ability. The study therefore concluded that school pupils with high ego-involvement in a sport task and low perceived ability show motivational deficits manifested in less time investment on a task. This study focused on ego-involvement in a sport task while the current study sought to extend findings in the academic domain.

Existing research also attempts to explain the relationship between ability beliefs and academic achievement through and fear of evaluation. In the study by Blackwell et al. (2007) in the USA, students who believed that their ability is fixed perceived failure as an indicator of having low ability. When they failed a test, such learners displayed symptoms associated with helplessness. The seventh graders attributed their failure to factors like low ability. Attributing failure to factors outside one's control is a defense mechanism that helps such students deal with the threat to their ego arising out of failure. By attributing failure to factors

outside their control, these students do not change their behaviour and they set themselves up to fail again. When it came to choosing a strategy for the future, students with an entity theory chose negative strategies that avoided effort and gave up. Compared to students with an incremental perspective, entity view students are hypothesized to be more likely to fear evaluation because of the strategies they employ and therefore more likely to perform poorly in academics.

Literature in the area of achievement goals and academic achievement links the mastery-approach goal to low academic achievement among students (Hulleman et al., 2010). The meta-analysis by Hulleman et al. was a review of 243 correlational studies of self-reported achievement goals comprising 91, 087 participants. The performance-approach goal, on the other hand, is associated with high academic achievement (Barron & Harackiewicz, 2003; Harackiewicz et al., 2002). The relationship between achievement goals and academic achievement is therefore inferred as one of the negative outcomes that follow adoption of performance goals. Findings so far point to the fact that fear of negative evaluation will follow learners who adopt a performance orientation because of the need to protect their self-esteem from supposed social devaluation in the event of failure. This is likely to be highly related to poor academic achievement.

In Kenya, available research has focused on perceived ability in relation to academic achievement. For instance, Kwena (2007) found positive indices of correlation between academic self-concept and academic achievement implying

that pupils who performed well perceived themselves to have high academic self-concept. Githua and Mwangi (2003) in a study involving 746 diploma students respondents also found a significant relationship between students' mathematics self-concept and motivation to learn mathematics with the former explaining 63% variance in the latter. Further, Okoko (2012) in his study of 300 secondary school students in Ndhiwa District, found out that up to 59% of students who performed well felt proud of their achievement and always felt like showing off. This finding shows a link between academic achievement and fear of academic evaluation in the subsequent task working through self-worth maintenance.

Literature so far reviewed links academic self-concept to achievement but does not define the relationship between ability beliefs and fear of negative evaluation and the extent to which they predict academic achievement. This study therefore sought to find the extent to which students' ability beliefs, achievement goals and fear of negative evaluation in the academic domain predict academic achievement among secondary school students in Mombasa County.

2.6 Gender Differences in Ability Beliefs, Achievement Goals, Fear of Negative Evaluation and Academic Achievement

There is very little empirical research on differences in goal orientation by gender or ethnicity (Midgely, Kaplan, & Middleton, 2001). However, gender differences in the adoption of achievement goals have been established in the literature. In the UK, Hall, Hanna, Hanna, and Hall (2015) conducted a census study among

pharmacy students at Queens University, Belfast, Northern Ireland (N = 529). The study aimed to explore associations between student goal orientation scores and academic performance, gender, and level of study. A secondary objective was to determine whether there were any relationships between goal orientations and students' views on various aspects of pharmacy practice. An electronic questionnaire was used to collect data. The attitude-toward-learning questionnaire was used to measure students' goal orientations. Findings of the study revealed that low performers (who were more likely to be male than female) were more likely to have a greater score for work avoidance than high performers. Furthermore, from the linear regression model, it appeared that mastery avoidance and work avoidance were important factors in relation to students' grades. Their findings on work avoidance and academic performance appear to mirror those of Barkur, Govindan, and Kamath (2013) who conducted a study with 244 second year Bachelor of Medicine and Bachelor of Surgery (MBBS) students of Melaka Manipal Medical College, Manipal campus, Manipal University, India. Students were categorised as high performers and low performers based on their first year university examination marks. Goal orientation was assessed through a validated questionnaire developed by Was et al. (2006) as cited in Barkur et al. Cumulatively, findings lead to the conclusion that work avoidance goal orientations among the low performers accounted more for poor performance compared with the high performer group. Contrastingly, the current study compressed the goal orientation sub-groups in Barkur et al. to two main groups -

mastery and performance. Additionally, the Achievement Goals Questionnaire (Elliot & Murayama, 2008) measured goal orientation in the current study. Both Hall et al. (2015) and Barkur et al. (2013) used samples from college students. Additionally, Barkur et al.'s goal orientations featured four levels of approach and avoidance. The current study compressed achievement goals into two general groups of mastery and performance goals. Finally, the current study sought to extend findings of both Hall et al. and Barkur et al. using samples from different cultural milieu.

Perrot, Deloney, Hastings, Savell, and Savidge (2001) also found significant differences with regard to gender, with male students more likely to be performance-oriented than females. This differs from other work conducted with pharmacy students in the United States of America where there were no significant differences found for goal orientations by gender, although males did score higher for work avoidance than females.

Midgley et al. (2001) posit that research in performance goals seem to be beneficial to boys in competitive environments but come at a cost such as cheating, reluctance to help others and use of avoidance strategies. In their experimental study on a sample of 166 undergraduates (79 men and 87 women) in an introductory psychology class in the USA, Barron and Harackiewicz (2001) gender differences were also found with more men likely to have higher inclination towards mathematics. Similarly, Ross, Bruce and Scott (2013) in a study on a sample of 996 grade 7-10 students (500 males and 496 females) aged

13-16 years found out that males had more positive scores than females on self-belief scales and lower scores on fear of failure. Males were also more likely to adopt a fixed perspective about mathematics ability.

Gender differences in individuals' ability beliefs have been identified in the literature. Harackiewicz et al. (1997) carried out a study on a sample of 311 introductory psychology students (112 men and 199 women) at a large university in the USA. The study aimed to test the relations between individual differences in achievement motivation and the adoption of three different types of achievement goals (mastery, performance, and work avoidance) and, the relations between these goals and intrinsic interest and performance. The study employed a prospective longitudinal design to examine the personality predictors of the goals that students adopted at the beginning of an introductory psychology course as well as the consequences of these goals for their interest and performance, measured at the end of the course. The study took place over the course of a semester in introductory psychology classes at a large university. Students' achievement orientation and test anxiety were assessed at the beginning of the semester, and their goals for the class were measured 2 -3 weeks into the semester. Students' grades were determined by their performance on multiple-choice exams. Grades were assigned by instructors according to normative curves recommended by the Psychology Department. It was found out that female students were more likely to adopt both mastery and performance goals. Harackiewicz et al. differ from the current study in two main respects: while the former studied university

students, the latter focused on secondary school students. Secondly, the use of prospective longitudinal approach markedly differs from the current study that used ex post facto design.

Stipek and Grazinski (1996) undertook a study whose purpose was to explore associations among beliefs about intelligence, effort, and performance. The sample consisted of 319 children (165 boys and 154 girls); 66 third graders, 119 fourth graders, 75 fifth graders, and 59 sixth graders. These children were enrolled in 32 schools serving predominantly poor and working-class, ethnically diverse families in three different school districts - two in a large, urban area in southern California and a third in a large, urban area in the Northeast. Achievement test scores were measured using report card grades taken directly from school files. Pretest grades were from the end of the previous year; posttest grades were from the end of the study year. The study found a significant gender main effect for the Ability-Performance Beliefs Scale with in favour of boys.

In an experimental study, Butler (2006) sought to examine the predictions that the kind of evaluation pupils anticipate will influence their initial achievement goals and in turn influence the quality and consequences of task engagement. The study was carried out among a sample of 312 pupils in Grades 7 and 8 (152 boys, 160 girls, mean age 13.9 years) in nine classes in four junior high schools in Jerusalem that serve similar, socially heterogeneous populations. Findings show a significant within-subjects effect for goal orientation by gender with analyses revealing weak

but significant tendencies for boys to endorse ability goals more than girls and for girls to endorse mastery goals more than boys. Unlike the current study, Butler measured mastery goals and ability beliefs before pupils were allowed to work on challenging tasks and hence anticipating evaluation might have altered the reporting of mastery goals and ability beliefs. It is hence evident that mastery goals and ability beliefs can be adapted in anticipation of evaluation.

Some studies have found no significant gender differences in students' ability beliefs (Atwood, 2010). Studies have however found a relationship between the extent to which individuals perceive their ability and age. Such studies begin from the premise that children are not born believing that intelligence is fixed or unchangeable. They further point out to adolescence as the time when beliefs about intelligence begin to be clear (Blackwell et al., 2007).

Further empirical support is provided in an experimental study by Verniers and Martinot (2015) among a sample of 85 ninth-grade students in France (50 males and 35 females) with mean age of 14.36 years. Students were randomly assigned to two groups and instructed to complete a questionnaire. Half of the students (26 boys and 17 girls) had to rate the intelligence of female targets, while the other half (24 boys and 18 girls) had to rate the intelligence of male targets. The participants were randomly assigned to one version of the questionnaire and were unaware of the other version. A significant main effect of gender on the measure of malleable intelligence in favour of boys was found. The study concluded that

students are knowledgeable about gender stereotypes regarding intelligence and its relation with academic achievement which is unfavourable for female students. However, there was no significant target's gender effect on the measure of fixed intelligence. The difference between the current study and Verniers and Martinot lies in the measures taken. While the former sought to establish gender-based stereotypes on intelligence beliefs, the latter study focused on self-reports of the construct.

Gender has been found to predict evaluative anxiety. For instance, in a cross-sectional correlation study of 488 university students in Jordan, Al-Shuaibi et al. (2014) found significant differences in evaluative anxiety between female and male students with female students reporting higher anxiety. The study established that anxiety is experienced in terms of fear of negative evaluation and testing. Contradictory findings were provided by Ganesh, Athilakshmi, Maharishi, and Maya (2015) in their study on the relationship between fear of negative evaluation and anxiety among 64 students (33 female and 31 male) at VIT University - Chennai, India. The survey study employed the Fear of Negative Evaluation Scale by Watson and Friend (1969). Results of the survey research design show no significant differences in fear of negative evaluation between male and female students. However, the mean fear of evaluation score for female students was marginally higher than that of male participants. Departing from Gamesh et al., the current study used the Brief Fear of Negative Evaluation (Elliot & Murayama, 2008) to measure fear of negative evaluation. These findings find support in the

study by Yokus (2013) among 82 undergraduate music teacher candidates in the Faculty of Education at Gaziosmanpasa University in Turkey who found no significant gender differences in fear of negative evaluation. Similar to the current study, Yokus measured fear of negative evaluation using The Fear of Negative Evaluation Scale and used achievement scores from students' records. The findings support Aydin (2008) as cited in Yokus (2013) who analysed the relationship between fear of negative evaluation and language anxieties of students studying foreign languages. No significant gender differences were found on fear of negative evaluation. Additionally, findings by Sevimli (2009) as cited in Yokus (2013) show no statistically significant differences in fear of negative evaluation scores of the participants according to gender.

Related studies in this area have focused on differences in test anxiety. Segool, Carlson, Goforth, Von der Embse, and Barterian (2013) carried out a study to explore differences in test anxiety on high-stakes standardized achievement testing and low-stakes testing among elementary school children. The sample consisted of 335 elementary school students in Grades 3 through 5 in a Midwestern state in the USA. Thirty-seven teachers also responded to a teacher questionnaire. Teachers reported on their perceptions of students' anxiety before and during testing, as well as their own anxiety related to students' expected performance. Test anxiety was measured using the Children's Test Anxiety Scale (CTAS) by Wren and Benson (2004) as cited in Segool et al. and the test anxiety content subscale of the Behaviour Assessment Scale for Children, Second Edition (BASC-2-TA)

(Reynolds & Kamphaus, 2004, as cited in Segool et al., 2013). Results show that girls reported more total test anxiety than boys. Students reported significantly more overall test anxiety in relation to high-stakes testing versus classroom testing on two measures of test anxiety. Students also reported significantly more cognitive ($r = -.20$) and physiological ($r = -.24$) symptoms of test anxiety in relation to high-stakes testing. While findings are indirectly linked to the current study, they show a link between evaluation and anxiety which anchors this study.

Similar findings were reported by Putwain, Woods, and Symes (2010) in a study of personal and situational predictors of test anxiety among a sample of 175 students (115 female and 60 male) mean age 17 years ($SD = 1.0$) at a suburban sixth-form college. Self-report questionnaires were used for data collection. The study used the Achievement Goals Questionnaire (Elliot & MacGregor, 2001) to measure achievement goals. The Patterns of Adaptive Learning Scales (Midgley et al., 2000, in Putwain et al.) examined the association between the learning environment and students' motivation, affect and behaviour. The Academic Self-description Questionnaire II (Marsh, 1990, 1992, in Putwain et al.) measured students' perception of their academic competence. The Revised Test Anxiety Scale (Benson, Moulin-Julian, Schwarzer, Seipp, & El-Zahhar, 1992, in Putwain et al.) measured test anxiety on four subscales: worry, tension, test-irrelevant thinking, and bodily symptoms. The study found gender to be a significant predictor of tension, indicating self-reported tension was higher in female students. Significantly, and related to the current study, Putwain et al. found perceived

academic competence to relate to worry and tension, hence underscoring the relationship between perceptions of ability as reflected in academic achievement and fear of negative evaluation as manifested in anxiety.

Contradictory findings on the relationship between gender and academic achievement abound in the literature. One group of studies point to the achievement gap between males and females while another group finds girls to perform higher. Yet another line of research finds no significant differences in academic achievement. In a longitudinal study, Harackiewicz et al. (2002) found that women attained higher grades than men. Harackiewicz et al. (2005) also found significant differences in achievement between females and males. Overall, female students achieved higher grades than males. Some studies have found out that males outperform females in mathematics (Veenstra & Kuiper, 2004, as cited in Ross et al. (2013). The findings are corroborated in a study by Elliot et al. (2005) where gender was found to significantly predict performance with more males performing better than females. A related study in the UK by Sheldrake et al. found that there was no significant difference in boys' and girls' GCSE grades.

Research in Kenya on gender differences in evaluative anxiety is scarce. Kwena (2007) in a study among 972 pupils in Bondo, Kenya found out that pupils in lower classes had significantly higher academic self-concept compared to those in upper classes. It was concluded that when children start school they are enthusiastic and highly motivated until they experience failure and pressure to

achieve. It is then that their self-evaluation based on academic performance decreases. Further, girls had higher academic self-concept in lower classes though boys overtook them in upper classes. Literature reviewed indicates gender differences in ability beliefs, fear of evaluation in the next task and academic achievement. However, research on gender differences in achievement goals is scarce. This study therefore sought to determine gender differences in ability beliefs, achievement goals and fear of negative evaluation and ultimately, in academic achievement among secondary school students in Mombasa County.

2.7 Summary of Review of Related Literature

Literature reviewed shows that students who believe that a task measures their ability are more likely to worry about their future performance. They are more likely to fear negative evaluation in the academic domain. Contradictory positions have also been found on the relationship between achievement goals and academic achievement. It has also been found that fear of negative evaluation varies by gender from the perspective of evaluative anxiety. However, though a substantial body of literature exists in the area of ability beliefs and achievement goals and their relationship with academic achievement, studies have not focused on them in a single model. Similarly, gaps remain in the extent to which the two interact with fear of negative evaluation in determining differences in academic achievement. Secondly, most of the research reviewed is from Western countries among college samples and very few studies have been done in Africa, thus making it difficult to

generalize these findings to the population of secondary school students in Kenya. This necessitated a study among secondary school students in Mombasa County, Kenya to find out the extent to which ability beliefs, achievement goals and fear of negative evaluation predict academic achievement.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This chapter describes the research design, study location, target population, sampling techniques, sample size, research instruments, and data collection methods. Ethical and logistical considerations are also highlighted. Finally, data analysis is discussed.

3.2 Research Design

Ex post facto research is a method of teasing out possible predictors of events that have happened and cannot, therefore, be controlled or manipulated by the investigator (Cooper & Schindler, 2001, as cited in Cohen, Manion, & Morrison, 2007). *Ex post facto* research can also be used instead of an experiment, to test hypotheses about cause and effect in situations where it is unethical to control or manipulate the dependent variable. According to Kerlinger (1970) as cited in Cohen et al., in *ex post facto* research, the independent variables have already occurred. The researcher then examines retrospectively the effects of a naturally occurring event on a subsequent outcome with a view to establishing a causal link between them. This design was selected for this study because it enabled the researcher to work backwards to understand the probable cause-effect relationship between ability beliefs, achievement goals and fear of negative evaluation and academic achievement without manipulating any of the independent variables. The

researcher sought to discover the causes of poor academic achievement by comparing students in whom the outcome is high with those students whose outcome is low based on already existing ability beliefs, achievement goals and fear of negative evaluation.

3.2.1 Variables of the Study

The study sought to find the extent to which ability beliefs, achievement goals and fear of negative evaluation predicted academic achievement. Ability beliefs, achievement goals and fear of negative evaluation were the independent variables which were measured on interval scale. Ability beliefs were measured at two levels - entity and incremental. Achievement goals were also measured at two levels - mastery and performance. Academic achievement was the outcome variable which was also measured on interval scale. Gender and type of school were intervening variables measured on nominal scale. The variables were presented in Table 3.1.

Table 3.1
Study Variables

Variable	Measurement Scale
Ability beliefs	Interval
Achievement goals	Interval
Fear of negative evaluation	Interval
Academic achievement	Interval
Gender	Nominal
Type of school	Nominal

3.3 Location of the Study

This study was conducted in Mombasa County. The county covers an area of approximately 230 km² with a population of just below one million people. The county borders Kilifi County to the north, Kwale County to the south west and the Indian Ocean to the east. It lies about 50 m above sea level. The county has both urban and rural settlements and the residents are engaged in various socio-economic activities such as tourism, fishing, industry and trade as well as subsistence farming in a few areas. Administratively, schools are divided into four sub-counties; Mvita, Chagamwe, Likoni and Kisauni. There are 36 public secondary schools in the county, of which 12 are boys' only schools, 10 girls' only schools and 14 are mixed schools. Mombasa County was selected for this study based on the poor academic underachievement as presented in Table 3.2.

Table 3.2
KCSE Results in Mombasa County, 2010-2016

Grade	2010	2011	2012	2013	2014	2015	2016
A	33	24	27	34	65	34	4
A-	110	110	150	148	168	128	60
B+	162	139	178	198	269	135	109
B	164	235	212	236	261	182	171
B-	262	271	276	307	332	235	175
C+	366	332	367	355	425	369	216
C	463	483	480	482	575	520	352
C-	858	609	624	651	724	640	502
D+	513	768	845	853	815	889	684
D	821	1070	1131	1199	1083	1245	1307
D-	906	1221	1348	1254	1216	1334	2775
E	238	334	423	349	301	321	1223
X	8	37	77	73	48	29	0
Y	38	175	6	7	12	0	0
Total candidates	5349	5818	6304	6137	6321	6169	7626
Mean	4.30	4.21	3.89	3.60	4.14	4.23	3.21

Source: Mombasa County Education Office, 2017.

From Table 3.2, it is evident that Mombasa County suffers poor academic achievement at KCSE. It is instructive to note for instance that in 2016, 72.00% of candidates who sat KCSE got between D+ and E grades. This made the current study urgent in Mombasa County.

3.4 Target Population

The target population comprised 3,993 form three students and 622 teachers from 36 public secondary schools in Mombasa County, Kenya. The students were categorized by gender. Mvita has 15 schools, while Likoni, Changanwe and Kisauni each have 7 schools respectively.

3.5 Sampling Techniques and Sample Size

3.5.1 Sampling Techniques

Stratified, purposive and simple random sampling methods were used to select the sample from the target population divided on the basis of gender. Mombasa County has four sub-counties from which one school each for boys, girls and mixed categories was purposively selected (Mugenda & Mugenda, 2003). Twelve schools representing 33.00% of the total school population were thus selected for the study. Form three class teachers from each of the selected schools also formed part of the sample. For schools with more than one stream, simple random sampling was used to pick the stream. Similarly, individual respondents were selected using simple random sampling.

Purposive sampling was used to pick the class teachers for the study. Class teachers were expected to be able to have an opinion on the background behind students' ability beliefs, achievement goals and fear of negative evaluation.

3.5.2 Sample Size

Based on attendance records, it was estimated that there are not less than 40 students per form three class in public schools in Mombasa County. The study therefore purposively sampled 40 students from each selected school. Where a school had more than two streams, simple random sampling was used to select a stream using the lottery method. The same method was employed if any stream had more than 40 students. A nominal roll was used to provide the sampling frame

and 40 students picked using the lottery method. For the mixed schools, simple random sampling ensured equal representation based on gender per class. The total sample size was 480 students and 12 teachers. The sampling frame and student sample size was presented in Table 3.3.

Table 3.3
Sampling Frame and Sample Size

Sub-county	Number of schools			Sample gender		Total
	Boys	Girls	Mixed	Male	Female	
Mvita	8	7	1	60	60	120
Kisauni	2	1	4	60	60	120
Likoni	3	1	3	60	60	120
Changamwe	1	1	4	60	60	120
Total	14	10	12	240	240	480

The total sample size for the study was 492 respondents including 480 students and 12 teachers which represented 11.20% of the total target group.

3.6 Research Instruments

A questionnaire, structured interview and document analysis were employed for data collection.

3.6.1 Questionnaire for Students

The students' questionnaire was divided into four sections. Section A (see Appendix A) gathered respondents' demographic information of gender and admission number which were used to track academic achievement for three consecutive school term examinations. Section B measured students' perceived ability using the Implicit Theories of Intelligence Scale (Dweck, 2000) while Section C measured students' achievement goals using the Achievement Goals

Questionnaire - Revised (Elliott & Murayama, 2008). Section D measured fear of negative evaluation using the Brief Fear of Negative Evaluation Scale- II (Carleton et al., 2007).

a. Implicit Theory of Intelligence Scale

Students' perceived ability was measured using the 8-item Implicit Theories of Intelligence Scale (Dweck, 2000). Items refer to students' perceived competence as applied to school work. The scale contains four incremental and four implicit theory items and assesses general beliefs about ability. This scale contains eight items which were adapted by replacing the word 'you' for 'I' and changing the item structure to reflect a five point likert scale format ranging from 1 - Strong Disagree to 5 - Strongly Agree. Sample items include 'I cannot change my intelligence'. This instrument was chosen for this study because it displays good internal consistency ($\alpha = .82$ to $.97$) and test-retest reliabilities at 2 weeks in the original test ($\alpha = .80$ to $.82$, Dweck, Chiu, & Hong, 1995) and in other studies (Castella & Bryne, 2012). Permission for the use of this scale was governed by the conditions given by the developers of the instrument, that is, correct acknowledgement when used. The researcher committed herself to adhere to the conditions of use by correctly acknowledging the source.

The internal consistency reliability test was done for the instrument. In the pilot study, the instrument displayed good internal consistency and a moderate Cronbach alpha score of $.57$. The findings were presented in Table 3.4.

Table 3.4

Inter-item Correlations for Implicit Theory of Intelligence Scale

Item	Corrected item-total correlation
I am not sure that I can do anything to increase my intelligence	.48
I cannot change my intelligence.	.49
I just cannot change how intelligent I am.	.53
I lack ability to change my basic intelligence.	.43
My intelligence level can be improved with time and effort.	.51
I believe I can improve on my intelligence.	.47
I think I can change my intelligence a little.	.48
If given time, my intelligence level can be changed.	.54

b) Achievement Goals Questionnaire - Revised (AGQ - R)

The Achievement Goals Questionnaire is a self-report questionnaire developed by Elliot and Murayama (2008) to assess students' adaptation of goals. It is a five point Likert scale ranging from 1 - Strongly Disagree to 5 - Strongly Agree. It consists of 12 items in four sub-scales namely: mastery approach goals (3 items), mastery avoidance goals (3 items), performance approach goals (3 items) and performance avoidance goals (3) items. Internal consistency reliabilities ranged between .87 and .92 for performance approach. For this study, the four subscales were compressed into two, that is, mastery and performance goals by getting the mean scores for the two mastery and performance subscales respectively. Higher scores on each indicated higher acceptance of the goal orientation. Permission for use of this instrument is granted for educational research as long as the developers of the instrument are acknowledged. During the pilot study, the instrument posted

a reliability index of $\alpha = .77$ which was considered good enough for its use in the study. The inter-item correlations were presented in Table 3.5.

Table 3.5
Inter-item Correlations for Achievement Goals Questionnaire

Item	Corrected item-total correlation
I aim to master everything taught in every subject in school.	.45
I am aspiring to outperform other students in my class.	.57
My goal is to learn as much as possible.	.58
I aim to perform well when compared to other students.	.46
I want to avoid learning less than I am able to.	.59
My aim is to avoid to be a poor performer when compared to my classmates.	.50
I aspire to understand the content of the subjects as thoroughly as possible.	.62
My goal is to perform better than my classmates do.	.52
I want to avoid learning less than I am able to.	.49
I want to avoid performing worse than my classmates perform.	.62
I want to avoid not understanding subjects taught in school.	.49
I want to avoid being poor in performance compared to my classmates.	.56

c. Brief Fear of Negative Evaluation Scale

This scale (Carleton et al., 2007) measured students' fear of negative evaluation. Items on the 12-item scale are rated on a 4-point Likert scale ranging from 0 (Strongly Disagree) to 4 (Strongly Agree). Negatively worded items were reverse coded such that higher scores indicate higher fear of negative evaluation. Some words were changed to reflect the academic domain. It has recorded high reliability (Duke, Krishnan, Faith, & Storch, 2006; Weeks, Heimberg, Fresco, Turk, Schneier, & Liebowitz, 2005). The use of this instrument was guided by the conditions of use set out by its developers, that is, free to use as long as researchers

acknowledge the developers. The instrument reported a high reliability coefficient of $\alpha = .80$. The total inter-item correlations were given in Table 3.6.

Table 3.6

Inter-item Correlations for the Brief Fear of Negative Evaluation - II

Item	Corrected item-total correlation
I worry about what teachers will think of me	.53
It concerns me when I know teachers are forming an unfavourable impression of me.	.53
It frightens me when teachers notice my weaknesses	.65
The kind of impression I make on teachers worries me.	.58
It frightens me that teachers will not approve of my work.	.59
It frightens me that teachers will find a mistake with my work	.59
Teacher' and students' opinions of me concern me.	.56
What teachers are thinking about me worries me.	.54
My impression to teachers worries me	.59
It bothers me if I know that teachers and others are judging me	.65
Sometimes it concerns me a lot what teachers and others are thinking of me.	.69
It worries me that I may do or say wrong things in class.	.56

3.6.2 Semi-structured Interview Schedule

This instrument was used to collect data from 12 teachers. Interviews were used because according to Creswell (2009), they are useful in collecting some data from respondents that would not be easily collected using questionnaires. Face to face interviews allow flexibility in administration, clarification of questions and use of follow-up questions. The interview schedule solicited teachers' views related to students' ability beliefs, achievement goals, fear of negative evaluation in the academic domain and academic performance.

3.6.3 Document Analysis

This involved reviewing and analyzing students' school achievement records over three consecutive school terms. Document analysis aimed to arrive at students' academic achievement which was operationalized as the overall mark aggregated over three school terms. The mean scores were then converted into T-scores for comparison across the 12 schools.

3.7 Pilot Study

The researcher conducted a pilot study in order to evaluate feasibility, time, cost, and improve upon the study design prior to performance of a full-scale research. A pilot study was done on a sample of 40 Form three students from a boys' secondary school in Mombasa County. Respondents were randomly selected from one form three stream and were not included in the final study. The main regression findings of the pilot study were analysed and presented in Table 3.7.

Table 3.7
Overall Regression Model of Pilot Study

Model	Unstandardised coefficients			R ²
	B	SE	Beta	
Entity beliefs	-.24	.52	-.08	.06
Incremental beliefs	-1.01	.67	-.27	
Mastery goals	.85	.51	.27	.09
Performance goals	.23	.32	.11	
Fear of Negative Evaluation	.39	.27	.23	.05

Findings in Table 3.7 indicated that though none of the variables significantly predicted academic achievement, the direction of prediction was evident. While ability beliefs negatively predicted academic achievement, both achievement goals

and fear of negative evaluation positively predicted academic achievement. No significant gender differences were investigated at this stage because the sample was derived from one gender, that is, boys.

3.7.1 Validity of the Research Instruments.

To determine the content validity of the instruments, expert judgments were used. The instruments were scrutinized by the researchers' peers as well as her supervisors to judge the items on their appropriateness of content, and also suggest areas that require modification in order for the objectives of the study to be adequately addressed. The project supervisors were, therefore, used to ascertain whether the items in the instruments adequately addressed all the areas that needed to be investigated by the study.

3.7.2 Reliability of the Research Instruments.

Internal consistency method, which involves a single administration of the instrument and calculation of inter-item correlation of items was used to determine the instruments' reliability. The item correlation coefficients in the pilot study were compared to the original scales. High Cronbach alphas of .5 and above indicated that the instruments were reliable for this study (Creswell, 2009). A comparison of reliability coefficients of pilot study and original instruments is presented in Table 3.8.

Table 3.8
Comparison of reliability coefficients

Scale	Pilot	Original
Implicit Theories of Intelligence Scale	.57	.82
Achievement Goals Questionnaire - Revised	.77	.87
Brief Fear of Negative Evaluation - II	.80	.92

3.8 Data Collection Procedure

After getting research authorisation from relevant authorities, the researcher visited selected schools to meet school principals in order to formalise plans for data collection. On the day of data collection, the researcher administered questionnaires personally to respondents. Face-to-face interviews were conducted with class teachers at their convenience. The interviews were audio recorded with permission from the respondents. Copies of academic achievement records for form three students for the previous three terms were also sought. The outcome of interest, that is, academic achievement was derived from the records.

3.9 Data Analysis

Descriptive and inferential statistics were used for analysing quantitative data using Statistical Package for Social Sciences (SPSS). Qualitative data was analysed using thematically. The recorded interviews from the field were transcribed verbatim or near verbatim and themes carved out in line with the objectives of the study (Creswell, 2009).

The following null hypotheses were tested at $\alpha = .05$.

Ho₁: Ability beliefs do not significantly predict academic achievement.

Statistical analysis technique: Simple linear regression

Ho₂: Achievement goals do not significantly predict academic achievement.

Statistical analysis technique: Simple linear regression

Ho₃: Fear of negative evaluation does not significantly predict academic achievement. Statistical analysis technique: Simple linear regression

Ho₄: The predictive model of ability beliefs, achievement goals and fear of negative evaluation on academic achievement is not significant. Statistical analysis technique: Multiple linear regression

Ho₅: There are no significant gender differences in ability beliefs, achievement goals, fear of negative evaluation and academic achievement. Statistical analysis technique: Independent samples t-test

3.10 Logistical and Ethical Considerations

3.10.1 Logistical Considerations

Permission for conducting this study was sought from the following institutions: Kenyatta University Graduate School, National Commission for Science, Technology and Innovation, (NACOSTI) and County Education Office, (CEO) Mombasa County, and the principals of the selected secondary schools.

3.10.2 Ethical Considerations

The researcher informed the respondents that participation was voluntary and assured participants that no private information would be divulged to a third party.

Participants were also informed that no identification mark was to be placed on the questionnaires. Additionally, respondents were assured that the information provided would only be used for the specific purposes of the study. Permission was sought from teacher respondents before audio recording the interviews. Finally, the nature and purpose of the research was explained to the students and teacher respondents by the researcher before data collection. This ensured that participants understood the benefit of taking part in the study.

CHAPTER FOUR
PRESENTATION OF FINDINGS, INTERPRETATION AND
DISCUSSION

4.1 Introduction

In this chapter, the findings of the study, interpretation and discussion of results are presented. The chapter is divided into three sections: Introduction, general and demographic information and results, interpretation and discussion of results. This study aimed to:

- i. Determine the extent to which ability beliefs predict academic achievement among students in secondary schools in Mombasa County.
- ii. Establish the extent to which achievement goals predict academic achievement among students in secondary schools in Mombasa County.
- iii. Determine the extent to which fear of negative evaluation predicts academic achievement among secondary schools students Mombasa County.
- iv. Find out the predictive weight of ability beliefs, achievement goals and fear of negative evaluation on academic achievement among secondary school students in Mombasa County.
- v. Establish gender differences in ability beliefs, achievement goals, fear of negative evaluation and academic achievement among secondary school students in Mombasa County.

4.2 General and Demographic Information

This section gives a general overview of the return rate of questionnaires and interview respondents used for the study and the final sample size.

4.2.1 General Information

The researcher visited all schools sampled for the study and administered questionnaires to students in person. A high return rate of 100% was reported because the researcher collected the questionnaires immediately after administration. Four hundred and twenty one of the expected 480 students were used in the analysis because 59 respondents did not have three consistent exam results. Additionally, 10 out of the 12 class teachers sampled were interviewed for the study. The actual students' sample for the study was presented in Table 4.1.

Table 4.1
Students' Return Rate

Type of School	Male		Female		Total	
	f	%	f	%	f	%
Boys	142	33.73	0	.00	142	33.73
Girls	0	.00	122	28.98	122	28.98
Mixed	76	18.05	81	19.24	157	37.29
Total	218	51.78	203	48.22	421	100.00

Note. f = frequency

4.2.2 Demographic Data

The schools were classified into boys, girls and mixed strata. Four boys' schools in the County contributed 142 respondents accounting for 33.73% of the entire sample while an equal number of girls' schools contributed 28.98% of students. Four mixed schools contributed 157 respondents. Overall, the students' sample consisted of 218 male and 203 female students from 12 secondary schools in

Mombasa County, Kenya. Semi-structured interviews were also done with 10 out of 12 teachers who were sampled for the study. For purposes of anonymity of their responses, their real names were not given. The details were presented in Table 4.2.

Table 4.2
Teacher Respondents

Gender	Boys		Girls	Type of school			Total	
		%		%	Mixed	%		
Male	2	20.00	0	.00	1	10.00	3	30.00
Female	2	20.00	4	40.00	1	10.00	7	70.00
Total	4	40.00	4	40.00	2	20.00	10	100.00

4.3 Results of the Study

Findings of the study were presented in the order of objectives. Descriptive statistics related to each objective were given followed by inferential statistics to test study hypotheses. Finally, a discussion of findings from quantitative analyses was done.

4.3.1 Ability Beliefs and Academic Achievement

To find out the extent to which ability beliefs predict academic achievement, respondents' ability beliefs scores were aggregated from the Implicit Theory of Intelligence Scale (Dweck, 2000). Ability beliefs were measured at two levels; incremental and entity.

a. Description of Respondents' Ability Beliefs

Students' mean scores on incremental and entity subscales were computed across gender and the findings presented in Table 4.3.

Table 4.3

Descriptive Analysis of Entity and Incremental Scores

Gender	Ability Beliefs	<i>M</i>	<i>SD</i>
Male	Entity	8.74	3.27
	Incremental	17.32	2.01
Female	Entity	8.56	3.25
	Incremental	17.41	2.13
Total	Entity	8.65	3.26
	Incremental	17.36	2.07

Findings in Table 4.3 show that on average, students hold higher incremental beliefs ($M = 17.36$, $SD = 2.07$) than entity beliefs ($M = 8.65$, $SD = 3.26$). Further, while male students reported higher means on entity beliefs ($M = 8.74$, $SD = 3.27$), their female counterparts reported slightly higher means on incremental beliefs ($M = 17.41$, $SD = 2.13$).

Respondents' scores on the two subscales were also aggregated after reverse scoring the items on the incremental subscale to come up with a continuum with entity and incremental at the two extremes. Higher scores indicated an individual's bias towards entity beliefs. The descriptive findings were presented in Table 4.4.

Table 4.4

Descriptive Analysis of Overall Ability Beliefs

Mean	<i>SD</i>	Skewness	SE Skewness	Kurtosis	Min.	Max
26.01	3.27	.54	.12	.91	16	39

Table 4.4 indicates that more students rated their ability beliefs towards the entity beliefs extreme on the continuum as seen in the positive skewness (.54). For comparison, respondents were divided into groups of incremental and entity beliefs based on the median of the continuum where higher scores indicated

students leaning towards the entity extreme. The findings were presented in Table 4.5.

Table 4.5
Frequency of Ability Beliefs by Gender

Gender	Ability beliefs			
	Incremental		Entity	
	f	%	f	%
Male	70	16.63	148	35.14
Female	70	16.63	133	31.59
Total	140	33.26	281	66.73

Note. f = Frequency

Findings from Table 4.5 show that while both male and female students reported equal incremental beliefs, more male students (35.14%) had entity beliefs. Overall, two thirds of the students reported entity beliefs.

b. Description of Students' Academic Achievement

Students' raw mean scores in all examinable subjects at the end of three consecutive term examinations were transformed into T-scores. Academic performance records for form two and form three were analysed. The descriptive analysis of the raw and T-scores was presented in Table 4.6.

Table 4.6
Students' Academic Achievement

Score	Mean	SE	Academic achievement			Min.	Max
			Skewness	SE Skewness	Kurtosis		
Raw	40.24	.56	.29	.12	.18	9.69	76.52
T-score	50.01	.49	.29	.12	.18	24.	81.00

Table 4.6 indicates positive skewness in students' academic achievement scores. This is an indicator of below average performance overall. From the T-scores,

three groups were derived reflecting students' academic achievement. Scores up to 44 were rated as below average, 45-59 were rated as average while 60-81 were classified as high achievement. Their distribution was then presented in Table 4.7.

Table 4.7
Classification of Academic Achievement

	Academic Achievement	
	f	%
Below average	130	30.90
Average	213	50.60
High	78	18.50

Note. f = frequency

Table 4.7 shows a minority of students (18.50%) recorded cumulatively high academic scores over three school terms. Half the sample recorded average academic achievement while a moderate (30.90%) number of students recorded low scores.

c. Hypothesis Testing

To find out the extent to which ability beliefs predict academic achievement among form three secondary school students in Mombasa County, the following null hypothesis was developed.

H_{01} : Ability beliefs do not significantly predict academic achievement.

Simple linear regression was used to find out the extent to which ability beliefs predict academic achievement using the enter method with ability beliefs as the independent variable and academic achievement as the dependent variable. Ability beliefs and academic achievement were not strongly correlated as seen in Table 4.8.

Table 4.8

Model Summary of Ability Beliefs and Academic Achievement

Model	<i>R</i>	<i>R</i> ²	Adjusted <i>R</i> ²	Std. Error of the estimate
1	.13	.02	.01	9.95

Table 4.8 shows a weak and positive correlation between ability beliefs and academic achievement. It also shows that ability beliefs account for 2.00% variance in academic achievement and therefore 98.00% of variance in academic achievement is explained by other factors.

The model was statistically significant, $F(2, 418) = 3.66, p = .027$. Evidence found led to the rejection of the null hypothesis. The findings were presented in Table 4.9.

Table 4.9

ANOVA of Ability Beliefs on Academic Achievement

Model	Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	Sig.
Regression	725.15	2	362.58	3.66	.027
Residual	41391.60	418	99.02		
Total	42116.75	420			

Additionally, it was found out that while entity beliefs negatively and significantly predicted academic achievement, incremental beliefs positively but insignificantly predicted academic achievement. Entity beliefs were therefore found to be the most significant predictor of academic achievement. The findings were presented in Table 4.10.

Table 4.10

Beta Coefficients for Ability Beliefs on Academic Achievement

Model	Unstandardized		Std Coeff. Beta	<i>t</i>	Sig.
	<i>B</i>	Std. Error			
(Constant)	47.68	4.91		9.70	.000
Entity beliefs	-.31	.16	-.10	-1.96	.050
Incremental beliefs	.29	.25	.06	1.16	.245

d. Qualitative Analysis

Teachers' perspectives were sought concerning students' ability beliefs. One of the findings that emerged was that a number of students felt dissatisfied with their average performance and thought they could perform better. However, the reasons given by Teacher 6 show that, students' ability beliefs are extrinsically motivated. For instance, students would want to do better because "the reputation of the school is also important".

It strongly emerged that culture was an important determinant of the extent to which students felt that they could change their destinies. This was most evident among girls. In the words of Teacher 5,

According to the culture of the people living around, students, especially girls are not allowed to...what can you say...to get knowledge. To them they give more weight to the boys...what they are being told at home contributes a lot. Because, psychologically if a student has been told at home that "wewe soma tu lakini hakuna mahali utakwenda, au wewe soma tu lakini mwishowe utaolewa"

(your education will take you nowhere or you will get married despite your education)...So majority do not find education important.

It is therefore expected that female students from the particular culture may not find education important and hence see their ability as unchangeable.

Teacher 5 also described a sense of learned hopelessness as central to female students' ability beliefs. This is especially so with poor achieving girls who will report that "sijui kama naweza...labda hapo kwenye C ndio naweza kufika" (I do not think I can...the highest I can achieve is grade C). Another dimension to the phenomenon was provided by Teacher 10 who reported that parents have also given up trying to encourage their children. In her words;

...the parents also, some have despaired, they have given up. Because they are saying "ah madam, hawa hawaskii, tukiwaambia sisi hawaskizi, waambieni nyinyi walimu wao nyinyi ndio watawaskiza". (They do not listen to us and it is better that you teachers deal with them)

The extrinsic nature of ability beliefs was also exposed by Teacher 1 who though agreeing that some students have the mindset of 'I am not so good and even if I try maybe it will not work'; she also put down other considerations in the form of family issues. In her words, "some of them come from very violent homes, mother and the father have separated, other times they are fighting, others the poverty levels are bad...someone tells you... "you know last night we went to bed without

eating anything”...so they have a mixture of problems”. The import of all this is that students may not focus on their abilities if their immediate needs are in want.

d. Discussion of Findings

This study sought to find out if ability beliefs predict academic achievement. Descriptive findings show that students hold higher incremental beliefs. In particular, the findings indicate that in comparison, males score higher on entity beliefs while females scored slightly higher on incremental beliefs. Inferential analysis found out that while entity beliefs negatively and significantly predicted academic achievement, incremental beliefs positively but insignificantly predicted academic achievement. Findings led to the rejection of the null hypothesis hence the conclusion that ability beliefs significantly predict academic achievement.

These findings support those of Dweck (2010) which show that students with incremental beliefs of ability significantly outperform their classmates who hold fixed mindsets. In another related longitudinal study carried out in England, Sheldrake et al. (2015) found that students' ability self beliefs influenced their GCSE grades. Similarly, Blackwell et al. (2007) in their study among 373 7th grade students found that those who endorsed the belief that intelligence is incremental predicted higher grades.

These findings support the notion that students who perceive themselves as competent and capable and worthy of success are deemed to achieve superior academic performance. This is in line with findings of a longitudinal study by

DuBois and Cooper (2004) who found that positive beliefs have a favourable influence on academic achievement.

4.3.2 Achievement Goals and Academic Achievement

The second objective of the study sought to determine the extent to which students' achievement goals predicted academic performance. Descriptive analysis of students' achievement goals scores was done followed by hypothesis testing and discussion of findings at the end.

a. Descriptive Analysis of Students' Achievement Goals

Achievement goals was measured using the Achievement Goals Questionnaire - Revised (Elliott & Murayama, 2008). This was done at two levels, mastery and performance. The descriptive findings were presented in Table 4.11.

Table 4.11
Descriptive Analysis of Achievement Goals

Score	Mean	SE	Achievement goals				Min.	Max
			Skew	SE-Skew	Kurtosis			
Mastery	23.50	.19	-.45	.12	-.33	12	30	
Performance	24.23	.24	-1.27	.12	1.41	6	30	

Data in Table 4.11 indicates negative skewness implying that many students reported high mastery and performance goals.

The students were then divided into two groups of high and low on each of the subscales. This was done using the medians of the scores. For mastery goals, the minimum score was 12 and the maximum score, 30. For performance goals, the minimum score was 6 while the maximum was 30. The median score for mastery

goals was 21 while the median score for performance goals was 18. Comparisons done based on gender and the findings presented in Table 4.12.

Table 4.12
Descriptive Analysis of Achievement Goals by Gender

Gender	Mastery				Performance			
	Low		High		Low		High	
	f	%	F	%	f	%	f	%
Male	26	6.20	192	45.60	41	9.70	177	42.00
Female	29	6.90	174	41.30	16	3.80	187	44.40
Total	55	13.10	366	86.90	57	13.50	364	86.50

Note. f = frequency

Data in Table 4.12 shows that more male students reported mastery goals (45.60%) than female students (41.30%). Female students reported higher performance goals (44.40%) than their male counterparts (42.00%). In total, almost equal numbers of students reported high mastery and performance goals.

b. Hypothesis Testing

To establish the extent to which achievement goals predict academic achievement among form three secondary school students in Mombasa County, the following null hypothesis was formulated:

H_{02} : Achievement goals do not significantly predict academic achievement

Simple regression analysis was used to predict the extent to which mastery and performance goals predict academic achievement using the enter method. Achievement goals was the independent variable while academic achievement was the outcome variable. A positive and moderate correlation was established as presented in Table 4.13.

Table 4.13

Model Summary for Achievement Goals and Academic Achievement

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.25	.06	.06	9.73

Data in Table 4.13 indicates that achievement goals account for 6.00% variance in academic achievement. This means that 94.00% of variance in academic achievement is explained by other factors outside the scope of this study.

The regression model was statistically significant, $F(2, 418) = 13.32, p < .001$.

Evidence led to the rejection of the null hypothesis. The findings were presented in

Table 4.14.

Table 4.14

ANOVA of Achievement Goals on Academic Achievement

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	2522.68	2	1261.34	13.32	.000
Residual	39594.08	418	94.72		
Total	42116.75	420			

Further, the two levels were analysed to establish their respective predictive weight on academic achievement. The findings were then presented in Table 4.15.

Table 4.15

Beta Coefficients for Achievement Goals on Academic Achievement

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	48.71	3.25		15.01	.000
Mastery Goals	.52	.13	.20	4.06	.000
Performance Goals	-.45	.10	-.22	-4.34	.000

Table 4.15 clearly indicates that both mastery and performance goals were significant predictors of academic achievement. However, whereas mastery goals positively predicted academic achievement ($\beta = .52, SE = .13$), performance goals negatively predicted academic achievement ($\beta = -.45, SE = .10$). The findings suggest that an increase in performance goals is associated with a reduction in academic performance while an increase in mastery goals is associated with a commensurate increase in academic achievement.

c. Qualitative analysis

The researcher sought to investigate goal setting in secondary schools in Mombasa County from the perspective of teachers. It emerged that students set targets as part of the larger targets of the school. Subject teachers expect achievement targets from students which go into the record in the class teachers' mark books. Then departments set their targets which guide the overall school target. In some schools this is done at the beginning of the term while in others, it is done during academic clinics and in some schools the school target is posted on notice boards (Teacher 8). The timing of target setting was evident in the discussion with Teacher 5 who reported that "there is a form that students are given and this form has all the subjects the student takes...these forms are given at the beginning of every term, so they always remind themselves when setting the targets". As Teacher 2 also put it, "at the start of the term, they always set targets, we guide them as teachers". In the words of Teacher 3, "the student is expected to set a target in the presence of the parent who will sign the form". The teacher also signs the form and "the student

has to do that for all subjects before he is cleared". These sentiments were echoed by Teacher 9. The implication here is that target setting is a bureaucratic exercise that ensures that students and parents have attended academic clinics. This observation was supported by Teacher 4 who reported that the penalty for failure to achieve targets was parents being summoned to school to "discuss".

Monitoring of the targets for continuing students is done initially by the class teacher according to Teacher 5 and both subject teachers and class teachers according to Teacher 7. According to the latter, a chart showing students' targets is pinned in each classroom. For students joining form one, Teacher 3 set out an elaborate procedure for target setting which is exclusively out of the hands of students.

Normally we give them a target grade based on their KCPE performance. We assign them a grade that will form the basis of comparing the Value Added Points (VAP). So we expect that if a student came with grade B, they should either leave with grade B or better.

Target setting during academic clinics was found to produce contradictory reactions from students. While some students were confident to speak out about their targets, others felt humiliated. Teacher 2 argued that "many feel like they are being humiliated before their parents when they are asked "why are you failing?"." Feelings of humiliation in academic clinics make students display disidentified behaviour. Teacher 2 reported that it is not rare for a student to say in the presence

of the parent that "am here for a certificate" and tells the parent "mimi nasoma kupata certificate tu" (I am only in school to get a certificate) as if to emphasize the point.

It also emerged that students' targets were only realised with the active intervention of parents whose participation was curtailed by rampant illiteracy. In the words of Teacher 2, "...it becomes a challenge also for the class teachers because most of our parents are not literate, so we might set a target with the student and the parent cannot follow up and we end up losing the target."

An interesting dimension to students' achievement goals emerged in the interviews. It was found out that students displayed extreme disidentification with academics to the extent that they did not bother about school or the need to set any goals. According to Teacher 2:

Minority are the ones who are aware what they are doing in school and they try to excel but the majority are not concerned. Many of them come from the informal settlements so they come to school just for the certificate. Some of them also say that in the long run, "we will get a leakage of the exam".

This attitude seemingly tends to drive students away from the need to set any goals or follow them if they set them. This was supported by Teacher 1 who reported that "others are just not interested in school...It's like somebody is pushing them to come to school. And so when they come to school they block their minds. Or they are here physically but mentally, they have left".

The need to appear socially desirable also came up concerning the reasons some students set goals. It was found out that during choosing of subjects, some students prefer their peers choices just to appear "tough". In the words of Teacher 2, "there are some who choose Physics but are poor in it. Just because their friends have chosen Physics and it is seen like a tough subject, they also want to be seen as tough people". Specifically, the teacher pointed out the case in their school where a student has to choose between Physics and CRE. A student who performed well in CRE would pick Physics just because the friends are taking Physics.

Peer influence in subject selection was found to have consequences for academic achievement. When students chose subjects to please their peers, they did not aspire to master them but show off during class time. In the words of Teacher 2, "in their class, like the science class, in their class work they do well but when it comes to exams they don't do that well".

It also emerged that students may be pre-programmed to adopt performance goals in most of the schools through inter-class competitions. In the words of Teacher 1, at class level we have two streams...we keep on encouraging them to compete against each other". In contrast, according to Teacher 7, students compete with themselves in accordance with the "contracts" they signed in front of their parents. He also agreed that some students compete amongst themselves, especially "those who will come to you with two papers and say 'you marked this one right and you marked me wrong', so they are comparing with others". However, performance goals are actively encouraged through inter-school competitions. In his words

...we have academic contests, regional, county and even country level that we encourage our students to participate. They are always going for competition either to Kenyatta Mwatate, Kwale Girls, etc so they can get off their comfort zone, so that they stop feeling they are the best performance-wise in Coast region.

d. Discussion of Findings

This objective sought to find out the extent to which achievement goals predict academic achievement. Descriptive findings showed that many students in reported both high mastery and performance goals. Inferential analysis further revealed that achievement goals significantly predicted academic achievement. The null hypothesis was thus rejected. Both mastery and performance goals significantly predicted academic achievement. However, while mastery goals positively and significantly predicted achievement, performance goals negatively and significantly predicted achievement. From the inferential findings, it was therefore evident that students with higher mastery goals achieve more than those endorsing performance goals. The study findings support the study by Grant and Dweck (2003) who carried out a study on 451 students and found that learning (mastery) goals predicted higher achievement while performance goals predicted poorer performance. In a similar study done on 75 French students, Dupeyrat and Marine (2005) found that learning goals predicted higher achievement while performance goals predicted poorer performance. In another study, Elliot et al. (2005) also found that achievement goals predicted higher achievement.

The findings also support research on the relationship between goal orientation and feedback behaviour. In a longitudinal study carried out on 234 students to investigate the influence of goal orientation on feedback seeking behaviour, Vandewalle and Cummings (1997) as quoted by Vandewalle, Cron, Slocum and John (2001) found that there is a positive relationship between a learning (mastery) goal orientation and feedback seeking behaviour. This could offer an explanation on the higher academic achievement reported by students who endorse a mastery goal orientation.

However, the finding that mastery goals predict higher academic achievement contradicts the findings of the study done by Dompnier et al. (2009) who found out that an endorsement of mastery goals did not significantly predict performance among 267 French psychology 1st year students.

Descriptive findings of the study seem to support the emerging assertion that students do not hold mastery and performance goals in exclusivity. It suggests that students pursue performance and mastery goals at the same time (Chan, 2000) and they are not mutually exclusive (Covington & Mueller, 2001; Heidi & Harakiewiz, 2001; Murphy & Alexander, 2000).

4.3.3 Fear of Negative Evaluation and Academic Achievement

The third objective sought to find out the extent to which fear of negative evaluation predicts academic achievement. Students' fear of negative evaluation was measured by the Brief Fear of Negative Evaluation - II (Carleton et al., 2007).

Descriptive analysis of students' fear of negative evaluation scores was done followed by hypothesis testing and discussion of findings.

a. Descriptive Analysis of Students' Fear of Negative Evaluation

To describe students' fear of negative evaluation, a general score was derived from collating the 12 items of the scale. Higher scores were indicative of higher fear in evaluative situations in the classroom. The descriptive analysis was presented in Table 4.16.

Table 4.16
Descriptive Analysis of Fear of Negative Evaluation

Mean	SE	Skewness	SE-Skewness	Kurtosis	Min.	Max
31.07	.32	-.02	.12	-.20	12	48

Then two groups of high and low fear of negative evaluation were derived from the cumulative score using the median. The minimum score was 12 while the highest was 48. The median was set at 30. The groups were cross-tabulated with gender to compare students' reports of fear of negative evaluation. The findings were presented in Table 4.17.

Table 4.17
Fear of Negative Evaluation by Gender

Gender	Low	High	Total
Male	107(25.40)	111(26.40)	218(51.80)
Female	91(21.60)	112(26.60)	203(48.20)
Total	198(47.00)	223(53.00)	421(100.00)

Findings from Table 4.17 suggest that almost equal proportions of students reported low and high fear of negative evaluation respectively. However, slightly more than half the sample (53.00%) reported high fear of negative evaluation.

Similarly, almost equal numbers of male (26.40%) and female students (26.60%) reported high fear of negative evaluation. It is also evident that fewer girls reported low fear of negative evaluation.

b. Hypothesis Testing

To establish the extent to which fear of negative evaluation predicted academic achievement among form three students in secondary schools in Mombasa County, the following null hypothesis was formulated:

Ho₃: Fear of negative evaluation does not significantly predict academic achievement.

Simple regression analysis was done to establish the extent to which fear of negative evaluation predicted academic achievement using the enter method with fear of negative evaluation as the independent variable and academic achievement as the outcome. A weak but positive correlation was found between fear of negative evaluation and academic achievement. The findings were presented in Table 4.18.

Table 4.18

Model Summary of Fear of Negative Evaluation and Academic Achievement

Model	<i>R</i>	<i>R</i> Square	Adjusted <i>R</i> Square	Std. Error of the Estimate
1	.09	.01	.00	9.98

Data in Table 4.18 also shows that fear of negative evaluation accounted for only 1% of the total variance in academic achievement.

The regression model was not significant, $F(1, 419) = 3.63$, $p = .057$. Findings therefore failed to reject the null hypothesis. The finding was presented in Table 4.19.

Table 4.19
ANOVA of Fear of Negative Evaluation on Academic Achievement

Model	Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	Sig.
Regression	361.57	1	361.57	3.63	.057
Residual	41755.19	419	99.65		
Total	42116.75	420			

While fear of negative evaluation was an insignificant predictor of academic achievement, a negative predictive relationship was found ($\beta = -.14$, $SE = .07$). The finding was presented in Table 4.20.

Table 4.20
Beta Coefficient for Fear of Negative Evaluation

Model	Unstandardized Coefficients		Standardized Coefficients	<i>t</i>	Sig.
	B	Std. Error	Beta		
(Constant)	54.40	2.35		23.11	.000
Fear of Negative Evaluation	-.14	.07	-.09	-1.91	.057

Findings in Table 4.20 therefore imply that an increase in fear of negative evaluation is associated with a reduction in academic achievement. Hence, it is expected that students who report higher fear of negative evaluation will achieve lower than those who report lower fear of negative evaluation.

c. Qualitative Analysis

Teachers' perspectives were also sought concerning students' fear of negative evaluation and its implications.

It was found out that students have various reactions to impending evaluation after receiving prior negative evaluation. While previous performance did not have an effect on some, another group struggled to improve while another group would go all out to cheat in exams or skip them altogether. In one school, the challenge of skipping examinations was dealt with by introducing supplementary exams because according to Teacher 2, "previously, if you missed some papers you were not graded, so some of them were comfortable not being graded".

It emerged that in most schools, examination results are publicly placed on notice boards. The effect of the public display of success and failure brought diverse reactions to students. Shockingly, it appeared that failure did not affect some students in any way. In the words of Teacher 2, "most students don't care whether others know their performance". The observation was supported by Teacher 4 who reported that "I have not seen anyone who reacts negatively because it is not only their class but for the whole school". Teacher 5 described conflicting reactions: while some "take the initiative to come and talk to me or the class teachers who make a follow up", those who did not do well are "50-50, it is as if they do not understand themselves". Teacher 7 agreed with the sentiments, noting that;

I remember three years ago when the teachers started to display the students' performance, they didn't like it and the suspects are those who are not performing well and it's because it is embarrassing for them. And they would pluck the lists off....The good students see it positively. They like it - even when you don't give them any tangible reward in assembly.

The sentiments were supported by Teacher 8 who reported conflicting reactions to public evaluation especially in the presence of parents. In agreement with other teachers' reports, Teacher 8 found the difference to rest solely on success and failure with the latter not keen on having their performance discussed publicly. In the words of Teacher 9, while some feel embarrassed because of poor performance, "some feel proud of themselves - in fact they are the ones who are leading the parent towards the teacher..."

The link between success/failure and self-worth was evident in the interview with Teacher 3. In their school, "there are those who take others seeing their performance positively but others don't want to be associated with announcement of marks". This seemed to be an issue both for poor and good performers. Age also seemed to determine the extent to which students appreciated public display of their success and failure. According to Teacher 3 and Teacher 10, students in lower classes find no problem "but seniors, I don't know whether they find it degrading".

Students' fear of the next evaluation and consequently their poor performance was associated with their loss of self-worth when their performance was discussed openly in the presence of their parents. In most of the schools, it emerged that parents pick report forms on closing day. Though the intent of parents picking students' report forms is noble, the repercussions are sometimes unexpected. Teacher 3 reported that "the students are very sensitive when the teachers are talking to parents because they know parents will demand". Teacher 1 also reported that parents "give a tongue thrashing and it doesn't go down very well with them ". Some students have to endure parents complaining about the money they spend on them yet still fail, according to Teacher 8. However, Teacher 4 contradicted the rest because s/he "have not seen any case where students feel offended" when their performance is discussed openly. Additionally, a new dimension emerged in the interview with Teacher 5 in whose school students do not accompany parents in picking report forms. According to Teacher 5, such follow up when parents and students are together "makes the child to fear exams".

The fear of evaluation turned out to have some negative consequences for discipline. It was suggested that some students may use their poor preparation for tests as an excuse to incite their peers. As Teacher 3 put it,

There are certain students who have not been attending classes so they have not been preparing, not been reading, they don't have notes and they do not want to do exams because they will fail and their parents will reprimand them....So what they do is they

influence the others and they tell them 'these exams are not good'....There is a group that influences the others so anxiety is created....They incite others to negative behaviour.

Discussions with Teacher 6 and Teacher 10 seemed to shed light on the aetiology of this behaviour through schools' rewarding the best performers while referring "those who are not doing well to the guidance and counselling department".

Fear of the next evaluative situation also seemed to arise out of how teachers handled students' set targets. According to Teacher 1, "we go back with those targets to class, we read them out and remind the students that they are supposed to be working towards a certain target". The public display of students' targets was likely to make them fear the next exam as failure may expose their lack of ability.

d. Discussion of Findings

The study also sought to find out the extent to which fear of negative evaluation predicted academic achievement. From the study findings, more than half of the students reported high fear of negative evaluation with girls reporting higher fear of negative evaluation. Inferential analysis found out that fear of negative evaluation insignificantly predicted academic achievement. Findings therefore failed to reject the null hypothesis. Though fear of negative evaluation was found to insignificantly predict academic achievement, a negative predictive relationship was found, implying that an increase in fear of negative evaluation is associated with a reduction in academic achievement. These findings support Sevimli (2009)

as cited by Yokus (2013) who in a study among 82 music teacher candidates at Gaziosmanpasa University in Turkey found out that fear of negative evaluation negatively predicted musical instrument achievement.

Though research in Kenya on the relationship between fear of negative evaluation and academic achievement is scarce, related literature seems to point a negative relationship between anxiety and educational outcomes. For instance, the findings of this study support Mukolwe (2015) who studied the influence of examination anxiety among 359 students in Khwisero Sub-county, Kakamega County and found a negative prediction relationship with examination performance. The findings also lend credence to Amaya (2011) who studied the relationship between fear of negative evaluation and counselling help-seeking behaviours among 253 students in Nairobi County and found that students who were affected by fear of negative evaluation were less likely to seek professional psychological help.

4.3.4 Ability Beliefs, Achievement Goals and Fear of Negative Evaluation on Academic Achievement

The fourth objective of the study sought to establish the cumulative predictive weight of ability beliefs, achievement goals and fear of negative evaluation on academic achievement among form three students in secondary schools in Mombasa County.

To establish the extent to which ability beliefs, achievement goals and fear of negative evaluation predict academic achievement, the following null hypothesis was formulated:

Ho₄: Ability beliefs, achievement goals and fear of negative evaluation do not predict academic achievement.

Multiple linear regression was conducted using the enter method as a single model with ability beliefs, achievement goals and fear of negative evaluation as the independent variables while academic achievement was the outcome variable. A moderate positive correlation was found. The findings were presented in Table 4.21.

Table 4.21

Model Summary of Ability Beliefs, Achievement Goals and Fear of Negative Evaluation

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.27	.08	.06	9.70

Findings in Table 4.21 also show that the model accounted for 8% of the total variance in academic achievement. The model was statistically significant, $F(5, 415) = 6.51, p < .001$. Evidence led to the rejection of the null hypothesis. The findings were presented in Table 4.22.

Table 4.22

ANOVA of Ability Beliefs, Achievement Goals and Fear of Negative Evaluation

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	3062.50	5	612.50	6.51	.000
Residual	39054.25	415	94.11		
Total	42116.75	420			

To determine the predictive weight of each predictor within the model, the relative beta weights were analysed. Both mastery and performance goals emerged as significant predictors of academic achievement. No significant prediction was found for fear of negative evaluation and ability beliefs. The findings therefore suggest that both mastery and performance goals are the best predictors of academic achievement while fear of negative evaluation is the least significant.

The findings were presented in Table 4.23.

Table 4.23

Beta Coefficients for Ability Beliefs, Achievement Goals and Fear of Negative Evaluation

Model	Unstandardized Coefficients		Standardized Coefficients Beta	<i>t</i>	Sig.
	<i>B</i>	Std. Error			
(Constant)	49.93	5.44		9.18	.000
Fear of Negative Evaluation	-.09	.08	-.06	-1.15	.253
Entity beliefs	-.23	.15	-.08	-1.52	.129
Incremental beliefs	.22	.25	.05	.89	.372
Mastery Goals	.46	.13	.18	3.51	.001
Performance Goals	-.41	.11	-.20	-3.84	.000

c. Discussion of Findings

This study sought to find out the cumulative weight of ability beliefs, achievement goals and fear of negative evaluation in predicting academic achievement. The findings led to the rejection of the null hypothesis showing that as a single model, ability beliefs, achievement goals and fear of negative evaluation significantly predict academic achievement. This findings partially support the study findings

by Curry et al. (1997) as cited by *Curry et al.* (2006) who in a study of 156 pupils found out that students with ego (performance) orientation and low perceived ability had invested less time in a task compared to those ego involved but with a high perceived ability. Similarly, in a study of junior high students, Blackwell et al. (2007) found that students with an entity theory of intelligence saw failure as a sign of low ability and chose negative strategies that avoided effort finally giving up and this is hypothesized to lead to poor performance.

4.3.5 Gender Differences in Ability Beliefs, Achievement Goals, Fear of Negative Evaluation and Academic Achievement

The study also sought to establish gender differences in ability beliefs, achievement goals, fear of negative evaluation and academic achievement among form three students in secondary schools in Mombasa County.

a. Descriptive Analysis

The study sought to establish differences in means between male and female students in their reports of ability beliefs, achievement goals, fear of negative evaluation and academic achievement. The findings were presented in Table 4.24.

Table 4.24
Mean Differences in Ability Beliefs, Achievement Goals, Fear of Negative Evaluation and Academic Achievement

Variable	Gender			
	Male		Female	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Entity beliefs	8.74	3.27	8.56	3.24
Incremental beliefs	17.32	2.01	17.41	2.13
Mastery goals	23.45	3.72	23.55	4.18
Performance goals	23.39	5.15	25.14	4.38
Fear of negative evaluation	30.91	6.38	31.24	6.78
Academic achievement	52.95	10.14	46.86	8.88

Findings from Table 4.24 show that female students reported higher means on incremental beliefs, mastery goals, performance goals and fear of negative evaluation. Male students reported higher entity beliefs and academic achievement.

b. Hypothesis testing

To investigate whether the gender differences in means of ability beliefs, achievement goals, fear of negative evaluation and academic achievement were significant, the following null hypothesis was formulated:

Ho₅: There are no significant gender differences in ability beliefs, achievement goals, fear of negative evaluation and academic achievement.

To establish gender differences in the individual variables, the following supplementary null hypotheses were formulated:

Ho_{5.1}: There are no significant gender differences in entity beliefs among secondary school students

Ho_{5.2}: There are no significant gender differences in incremental beliefs among secondary school students

Ho_{5.3}: There are no significant gender differences in mastery goals among secondary school students

Ho_{5.4}: There are no significant gender differences in performance goals among secondary school students

Ho_{5.5}: There are no significant gender differences in fear of negative evaluation among secondary school students

Ho_{5.6}: There are no significant gender differences in academic achievement of secondary school students

Independent samples t-tests were done for analysis. The findings were presented in Table 4.25.

Table 4.25
Independent Samples T-test

Variable	<i>t</i>	<i>df</i>	Sig (2-tailed)	Mean Difference	Std. Error Difference
Incremental	.57	419	.567	.18	.32
Incremental beliefs	-.48	419	.630	-.09	.20
Mastery goals	-.25	419	.800	-.09	.39
Performance goals	-3.76	415.55	.000	-1.75	.47
Fear of negative evaluation	-.51	419	.609	-.33	.64
Academic achievement	6.57	417.46	.000	6.09	.93

Using $\alpha = .05$, an independent samples t-test was conducted to investigate whether male and female students differed significantly on entity beliefs. The test was insignificant, $t(419) = .57, p = .567$. An examination of the group means therefore

indicates that male students ($M = 8.74$, $SD = 3.27$) did not differ significantly from female students ($M = 8.56$, $SD = 3.24$). Evidence therefore failed to reject the first supplementary null hypothesis.

An independent samples t-test was also conducted to test whether male and female students significantly differed on incremental beliefs. The test was insignificant, $t(419) = -.48$, $p = .630$. These findings show that male students ($M = 17.32$, $SD = 2.01$) did not differ significantly from female students ($M = 17.41$, $SD = 2.13$) in incremental beliefs. The evidence failed to reject the second supplementary null hypothesis.

To test whether male and female students differed on mastery goals, an independent samples t-test was done. The test was insignificant, $t(419) = -.25$, $p = .800$. This means that male students ($M = 23.45$, $SD = 3.72$) were not significantly different from female students ($M = 23.55$, $SD = 4.18$). The supplementary null hypothesis failed to be rejected.

An independent samples t-test was also conducted to test whether male and female students significantly differed on performance goals. The test was significant, though the assumption of homogeneity of variance was violated $t(415.55) = -3.76$, $p < .001$. The findings therefore indicate that male students ($M = 23.39$, $SD = 5.15$) were significantly different from female students ($M = 25.14$, $SD = 4.38$). Female students therefore reported significantly higher performance goals. Evidence led to the rejection of the fourth supplementary null hypothesis.

To investigate whether male and female students significantly differed on fear of negative evaluation, an independent samples t-test was conducted. The test was insignificant, $t(419) = -.51, p = .609$. The findings led to the conclusion that male students ($M = 30.91, SD = 6.38$) were not significantly different from their female counterparts ($M = 31.24, SD = 6.78$) on fear of negative evaluation. Evidence failed to reject the supplementary null hypothesis.

Finally, to test whether male and female students differed significantly on academic achievement, an independent samples t-test was conducted. The test was significant, with the assumption of homogeneity of variance violated $t(417.46) = 6.57, p < .001$. Findings therefore suggest that male students ($M = 52.95, SD = 10.14$) were significantly different from female students ($M = 46.86, SD = 8.88$) in academic achievement. Evidence led to the rejection of the sixth supplementary null hypothesis.

c. Qualitative analysis

On average, it was found out that many schools had three tests in a term. It emerged that students might sit three papers in a day; morning, mid-morning and afternoon. This work overload was cited by students as one reason for poor performance. Teacher 3 said that "students have complained in the past that they don't have time for revision but you find that occasionally when we have given them time, we don't see them using it wisely. That is why we still maintain the same".

Students' academic performance was linked to the extent to which they attribute their success and failure. According to Teacher 3, those who perform poorly say that they did not read while others say they lack time due to chores at home or the school routine does not give them time to prepare. Others claim that they are given too much work by teachers. According to Teacher 6,

Those who are doing well attribute it to hard work, prayers and particular teachers who are good to them. Those who are not doing well attribute it to family issues...they can't revise at home...maybe they can't revise because they have no lights, school fees not been paid on time so they were absent etc....

One interesting aspect that emerged from the interview with Teacher 3 was that "many students when you ask them, they will tell you they are not doing as good as they want". This means that students still want to achieve.

Interviews with teachers laid bare the relationship between parents and the academic achievement of their children. One of the most important areas involved students selecting optional subjects. In the words of Teacher 2, "During the form three subject selection, they are given time to discuss and choose their subjects with their parents but since many parents are not literate, they don't make an informed decision."

Additionally, parental poverty was found to contribute to students' academic achievement. Students may not have school materials like log tables, mathematical sets and calculators. As Teacher 2 put it,

We once tried to force parents to buy them but they said they don't have money so what can we do? So in the long run we ended up allowing them to borrow but it causes a lot of confusion especially during exams....you might see a student doing the exam without the calculator and mathematical set. So it is logical that such a student will not perform well.

d. Discussion of Findings

This study found out that male students did not differ significantly from female students in entity beliefs. Similarly, male students did not differ significantly from female students in incremental beliefs. These findings support the studies by Atwood (2010). However, the findings contradict Ross et al. (2013) in a study on 996 students and found out that male students had more positive scores than females on self-belief scales. A similar finding was shown in a longitudinal study of 1085 students by Sheldrake *et al.* (2015) that showed that girls were generally more under confident than boys in their self beliefs than boys. In a similar study on 84 ninth-grade French students, Verniers and Martinot (2015) found a significant main effect of gender on the measure of intelligence in favour of boys.

The study findings revealed that male students were not significantly different from female students on mastery goals. However, male and female students significantly differed on performance goals, with female students reporting significantly higher performance goals. This finding contradicts the findings of

Perrot et al. (2001) who also found significant differences with regard to gender but with more male students likely to be performance-oriented than females. This could be attributed to social pressure in competitive environment such as mixed schools. This is supported by Midgley et al. (2001) in a study that found out that performance approach goals seem to be beneficial to boys in competitive environments but come at some cost such as cheating, reluctance to help others and use of avoidance strategies.

In another study by Harackiewicz et al. (2002) on 311 undergraduates, it was found out that female students were more likely to adopt both mastery and performance goals. This supports Nocholls (1989) as cited by Wang et al. (2002) who argued that endorsement of mastery and performance goals was not mutually exclusive.

The study also found no significant gender differences in fear of negative evaluation. This supports findings from a study done by Ganesh et al. (2015) among 64 students who found no significant differences in fear of negative evaluation between male and female students. Similarly, Aydin (2008) as cited by Yokus (2013) found no significant gender differences in on fear of negative evaluation. However, they contradict findings from a study of 488 students by Shuaibi et al. (2014) who found significant differences in evaluative anxiety between female and male students with female students reporting higher anxiety.

Finally, this study found significant gender differences in academic achievement in favour of males. This finding supports Otanga (2016) who found that girls' attitudes towards learning, reinforced by the socio-cultural environment contribute to their poor performance.

CHAPTER FIVE

SUMMARY CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This section presents a summary of the study, implications of the findings, conclusions drawn from the implications and recommendations as they relate to policy, practice and further research.

5.2 Summary

The study sought to investigate students' ability beliefs, academic goal orientation and fear of negative evaluation as predictors of academic achievement among secondary school students. The study was done among a sample of 421 students consisting of 203 girls and 218 boys and 10 teachers from 12 secondary schools in Mombasa County, Kenya. A questionnaire, document analysis and semi-structured interview were used to collect data.

The first objective sought to determine the extent to which ability beliefs predict academic achievement. The findings showed that on average, students hold higher incremental than entity beliefs. In addition, male students reported higher means on entity beliefs while females reported slightly higher means on incremental beliefs. However, on comparison, while both male and female students reported equal incremental beliefs, more male students held entity beliefs.

Inferential analysis found out that ability beliefs were a significant predictor of academic achievement. However, while entity beliefs significantly and negatively

predicted academic achievement, incremental beliefs insignificantly and positively predicted academic achievements.

The second objective of the study sought to establish the extent to which academic goal orientations predict academic achievement. Descriptive findings revealed that many students reported both high mastery and performance goals. In terms of gender, whereas male students reported higher mastery goals, female students reported higher performance goals. Further, the study revealed that mastery goals positively predicted academic achievement while performance goals negatively predicted academic achievement.

The third objective sought to determine the extent to which fear of negative evaluation predicts academic achievement. Descriptive findings show that almost equal proportions of students reported low and high fear of negative evaluation respectively. However, slightly more than half the sample reported high fear of negative evaluation. Almost equal numbers of male and female students reported high fear of negative evaluation. However, female students reported slightly higher fear of negative evaluation. Results of inferential analysis show that fear of negative evaluation insignificantly predicted academic achievement and the direction of relationship was negative. This implies that an increase in fear of negative evaluation is associated with a reduction in academic achievement.

The fourth objective sought to find out the predictive weight of ability beliefs, academic goal orientations and fear of negative evaluation on academic

achievement. The findings showed that as a single model, ability beliefs, achievement goals and fear of negative evaluation significantly predicted academic achievement. An analysis of the predictive weight of each predictor within the model showed that only mastery and performance goals significantly predicted academic achievement, positively and negatively respectively.

The fifth objective sought to establish gender differences in ability beliefs, academic goal orientation, fear of negative evaluation and academic achievement. The study findings revealed that female students reported higher means on incremental beliefs, mastery goals, performance goals and fear of negative evaluation while male students reported higher entity beliefs and academic achievement. Inferential analysis found no significant gender differences on both ability beliefs. Similarly, no significant gender differences were found on mastery goals. However, male students significantly differed from female students on performance goals in favour of female students. Further, no significant gender differences were found on fear of negative evaluation scores. Finally, male students were found to be significantly different from female students on academic achievement in favour of the former.

The final objective of the study sought to investigate teachers' perspectives concerning students' ability beliefs, achievement goals, fear of negative evaluation and academic achievement. Concerning students' ability beliefs, it was found out that academic achievement was related to upholding the school's reputation. In that

case therefore, students would adopt incremental beliefs not for themselves but for the larger school.

Concerning achievement goals, it was found out that students set performance targets as part of the larger targets of individual schools' overall performance targets. Goal setting was done either at the beginning of the term or during academic clinics in the presence of their parents. Goal monitoring is done by class teachers and parents and is hampered by parents' illiteracy and lack of concern. It was also found out that goal setting is heavily influenced by social desirability concerns, especially peer influence.

Fear of negative evaluation was related to the nature of announcing examination results and their public display on school notice boards. While this was true for some students, others were indifferent to failure even when it was made public. Fear of negative evaluation was also related to the loss of self-worth especially when students' poor performance was discussed in the company of their parents during academic clinics. Additionally, poor achieving girls were said to have a sense of hopelessness and therefore performed poorly in the next evaluative situation.

Surrounding culture has socialised girls not to value education as much as boys because of early marriages. Therefore, girls were found to achieve relatively lower than boys.

5.3 Conclusions

Findings of the study led to the conclusion that students who endorse incremental beliefs are more likely to outperform those who endorse entity beliefs. It was also concluded that a mastery goal orientation is positively related to higher academic achievement.

Findings of the study also lead to the conclusion that fear of negative evaluation is a risk factor for academic achievement. Fear of negative evaluation is linked to individuals' self-worth and the latter works against the former in cases of poor performance. There seems to be a link between an endorsement of mastery goals and entity beliefs and high academic achievement for male students. Female students endorse more performance goals than their male counterparts.

From qualitative findings, it was concluded that schools' policy programs students to endorse performance goals through goal setting in line with the overall school targets, reward and punishment following tests and competition. When more focus is put on performance goals and success is narrowly defined as outperforming others, teachers pressure students. This over reliance on extrinsic rewards allows students little choice on how to go about learning.

5.4 Recommendations

5.4.1 Policy Recommendations

- i. Teachers need to recognize the key role that a student's mindset plays in learning and ultimately in academic performance, hence develop the incremental beliefs in their students.

- ii. Teaching and examinations in their current format allow for students to receive and recall facts, which work against the need to master knowledge. Stakeholders in the area of curriculum planning, implementation and evaluation need to ensure that learning is a more holistic process encompassing knowledge mastery.
- iii. Teachers need to nurture self-esteem in the students hence lower or eliminate fear of evaluation altogether. This can be done by explicit teaching, modelling and presenting opportunities for students to develop confidence in themselves.
- iv. Teachers and school administrators should rethink the long-term gains of having students set goals in line with the school targets as this puts undue pressure on students to achieve. This might be one of the reasons for cheating in internal examinations in schools.
- v. Teachers should allow a level of independent action on the part of students in the classroom. This can be achieved by allowing students to work for the grades they feel efficacious about and be informed that the higher the grade they choose, the more they must accomplish.
- vi. Parents should be educated on the need not to peg children's overall worth on their academic achievement as it lowers their self-worth in the long term.

- vii. Curriculum developers need to come up with diverse programs other than academic evaluation in schools. This will ensure that students find worth in other domains that are also socially valued.

5.4.2 Recommendations for Further Research

- i. This study was carried out among a sample of secondary school students. It may be necessary to study ability beliefs, achievement goals and fear of negative evaluation among students in lower levels of education. Additionally, it may be important for future studies to use other sampling methods in sample selection.
- ii. This study employed an ex post facto research design and therefore assumed that all the variables under study already exist. It may be important for future researchers to manipulate fear of negative evaluation in experimental conditions.
- iii. While this study focused on Mombasa County only, the challenge of academic underachievement remains a national problem. It may be important for replication of this study in other geographical and cultural milieu for generalizability of findings.
- iv. It has been found that students set goals in line with overall schools' targets. It may be necessary that future studies specifically focus on the role of schools in goal setting.
- v. Future research may find it important to focus on the role of parents in goal monitoring.

- vi. Future studies may also find out why female students endorse higher performance goals and more fear of academic evaluation than male students.

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APPENDICES**Appendix A****Letter of Consent**

Dear student,

My name is Jayne Mwangi a Ph.D student at Kenyatta University. I am undertaking a study to understand why students underperform in their exams. You have been selected to participate in this study. I request you to fill in the questionnaire provided as accurately as you can. There are no right or wrong answers. The information you give is confidential. Do not write your name on the questionnaires. The information you give will only be used for the purposes of this study. You may decide to discontinue your participation in this study without any conditions. Thank you.

Jayne Mwangi

Kenyatta University

Appendix B

Students' Questionnaire

Please answer these questions carefully and honestly. All the information you give is confidential and will be used for research purposes only.

Section A: Demographic Information

1. Admission Number.....
2. Gender: Male () Female ()

Section B: Implicit Theories of Intelligence Scale (Self-Theory)

Here are a number of statements designed to investigate ideas about intelligence. There are no right or wrong answers. Please indicate the extent to which you agree or disagree with each of the following statements by with a tick (✓) to show the extent to which the statement is true or is not true for you.

Key: SD= Strongly Disagree; D= Disagree; NS= Not sure; A=Agree; SA= Strongly Agree

No	Statement	SD	D	NS	A	SA
1	I am not sure that I can do anything to increase my intelligence					
2	I cannot change my intelligence					
3	I just cannot change how intelligent I am.					
4	I lack ability to change my basic intelligence.					
5	My intelligence level can be improved with time and effort					
6	I believe I can improve on my intelligence					
7	I think I can change my intelligence a little					
8	If given time, my intelligence level can be changed					

Section C: Achievement Goals Questionnaire

The following 12 items describe the extent to which learners set their academic goals. For each statement, give your extent of agreement using the scale given.

Item	Statement	SD	D	NS	A	SA
1	I aim to master everything taught in every subject in school					
2	I am aspiring to outperform other students in my class					
3	My goal is to learn as much as possible.					
4	I aim to perform well when compared to other students					
5	I want to avoid learning less than I am able to					
6	My aim is to avoid to be a poor performer when compared to my classmates					
7	I aspire to understand the content of the subjects as thoroughly as possible.					
8	My goal is to perform better than my classmates do.					
9	I want to avoid learning less than I am able to					
10	I want to avoid performing worse than my classmates perform.					
11	I want to avoid not understanding subjects taught in school					
12	I want to avoid being poor in performance compared to my classmates					

Section D: Brief Fear of Negative Evaluation Scale

Read each of the following statements carefully and indicate (by putting a tick in the correct space) how characteristic it is of you according to the following scale:

Key: 1= Strongly disagree; 2 = Disagree; 3 = Agree; 4 = Strongly agree

No	Statement	SD	D	A	SA
1	I worry about what teachers will think of me				

2	It concerns me when I know teachers are forming an unfavourable impression of me				
3	It frightens me when teachers notice my weaknesses				
4	The kind of impression I make on teachers worries me				
5	It frightens me that teachers will not approve of my work				
6	It frightens me that teachers will find a mistake with my work				
7	Teachers' and students' opinions of me concerns me.				
8	What teachers are thinking about me worries me				
9	My impression to teachers worries me				
10	It bothers me if I know that teachers and others are judging me				
11	Sometimes it concerns me a lot what teachers and others are thinking of me.				
12	It worries me that I may do or say wrong things in class.				

Appendix C: Teachers' Semi-Structured Interview Schedule

1. How long have you taught at this school?
2. What is the average cut-off mark in Form one selection in the last 5 years?
3. What is the average performance in KCSE exams in the last 5 years?
4. Do students set targets for their schoolwork?
5. Do the students generally feel they can improve their performance or do they feel they can't change the status quo?
6. Do students aim to master the content of their subjects or do they strive to compete with other students?
7. How often do you have academic clinics in the school?
8. Explain how the program is conducted.
9. How do the students react on having the parents discuss their performance?
10. How does this affect their next evaluation?
11. Who collects the report cards at the end of the term?
12. How does their performance affect fear of the next examination?
13. Do the students discuss their individual performance with teachers?
14. Do students appear to be concerned about what other teachers and students think about their performance?

Appendix D

NACOSTI Research Permit

THIS IS TO CERTIFY THAT:
MS. JAYNE MUTHONI MWANGI
of KENYATTA UNIVERSITY, 0-80100
Mombasa, has been permitted to
conduct research in Mombasa County
on the topic: ABILITY BELIEFS, GOAL
ORIENTATION AND FEAR OF
EVALUATION AS PREDICTORS OF
ACADEMIC ACHIEVEMENT AMONG
SECONDARY SCHOOL STUDENTS IN
MOMBASA COUNTY, KENYA
for the period ending:
14th September, 2017

Permit No : NACOSTI/P/16/50542/13657
Date Of Issue : 16th September, 2016
Fee Received : ksh 2000



[Handwritten Signature]
Applicant's Signature

[Handwritten Signature]
Director General
National Commission for Science,
Technology & Innovation

Appendix E

Research Authorisation



REPUBLIC OF KENYA
MINISTRY OF EDUCATION, SCIENCE & TECHNOLOGY
STATE DEPARTMENT OF EDUCATION

Telegrams: "SCHOOLING",
Mombasa
Telephone: Mombasa 2315327 / 2230052
When replying please quote

COUNTY DIRECTOR OF EDUCATION,
MOMBASA COUNTY,
P. O. BOX 90204 – 80100,
MOMBASA.

Ref. No.MC/ED/GEN/23/5

18th July, 2016

The Principals of Secondary Schools
MOMBASA COUNTY

RESEARCH AUTHORIZATION JAYNE MWANGI –E83/13974/09

This is to confirm that Jayne Mwangi has been authorized to carry our research on "**Ability beliefs, Fear of Negative evaluation and academic goals as predictors of Academic Achievement Among Secondary Schools Students in Mombasa County**". She is a PhD Student at Kenyatta University.

She is expected to start her work on **19th July, 2016** to **11th August, 2016.**

She will furnish this Office with a copy of her research work upon completion.

Please accord her the necessary co-operation.

Newton E. Okwatsa
FOR: COUNTY DIRECTOR OF EDUCATION
MOMBASA

COUNTY DIRECTOR OF EDUCATION
P. O. BOX 90204 - 80100
MOMBASA

Copy to: All Sub County Directors of Education-**MOMBASA**

The Chairman Department of Educational Psychology
KENYATTA UNIVERSITY

Appendix F

Map of Mombasa County

