PREDICTORS OF ACADEMIC DISIDENTIFICATION AMONG
FORM THREE SECONDARY SCHOOL STUDENTS IN MOMBASA
COUNTY, KENYA

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E83/20052/2012

A RESEARCH THESIS SUBMITTED IN PARTIAL FULFILMENT
FOR THE AWARD OF THE DEGREE OF DOCTOR OF
PHILOSOPHY IN THE SCHOOL OF EDUCATION OF KENYATTA
UNIVERSITY

FEBRUARY 2016
DECLARATION

I confirm that this research thesis is my original work and has not been presented in any other university/institution for certification. The thesis has been complemented by referenced works duly acknowledged. Where text, data, graphics, pictures or tables have been borrowed from other works - including the internet, the sources are specifically accredited through referencing in accordance with anti-plagiarism regulations.

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DEDICATION

For those to whom failure is an opportunity to try again
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<td>Analysis of Variance</td>
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<td>ASE</td>
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<td>CAT</td>
<td>Continuous Assessment Test</td>
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<td>Grade Point Average</td>
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<td>IEI</td>
<td>Intellectual Engagement Inventory</td>
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<td>KCSE</td>
<td>Kenya Certificate of Secondary Education</td>
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<td>MMCS</td>
<td>Multidimensional-Multiattributional Causality Scale</td>
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<td>NACOSTI</td>
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ABSTRACT

The study investigated the extent to which gender, type of school, academic achievement and causal attributions predict academic disidentification of secondary school students. The extent to which academic self-esteem mediated the relationships with two specific aspects of disidentification, discounting and devaluing was also studied. The study employed correlational and exploratory designs. Martin Covington's Self-worth Motivation Theory and Carl Rogers' Self Theory of Personality Development anchored the study. Failure and inappropriate attributions were hypothesised to reduce students' academic self-esteem and result in self-worth protection through discounting feedback and devaluing academic achievement. The study was conducted in Mvita subcounty, Mombasa County, Kenya. Purposive, stratified and simple random sampling was used to select a sample of 449 students (206 male and 243 female) and 11 teachers from 12 schools. Research instruments included document analysis, a students' questionnaire and semi-structured interviews. For the students' questionnaire, the State Self-esteem Scale, Multidimensional-Multiattributitional Causality Scale and the Intellectual Engagement Inventory were adapted to measure academic self-esteem, causal attributions and academic disidentification respectively. Teacher interviews were done in the respective schools. Statistical Package for Social Sciences (SPSS) was used to analyze quantitative data. Qualitative data was analyzed using thematic analysis. All the hypotheses were tested at $p < .05$ level of significance using regression analysis and ANOVA. Findings show that female students reported higher discounting while male students reported higher devaluing. There was a significant interaction effect of gender and type of school on academic self-esteem and discounting. Academic self-esteem was positively related to academic achievement and negatively related to both discounting and devaluing. Academic achievement negatively predicted both discounting and devaluing and significantly predicted devaluing and not discounting. Stable attributions significantly positively predicted discounting. Stable and unstable attributions significantly positively and negatively predicted devaluing respectively. Internal attributions to success and external attributions to failure negatively and positively predicted discounting respectively. Internal attributions for success and external attributions for failure negatively and positively predicted devaluing respectively. 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. Overall, the findings of the study supported the guiding theory of the study - the Self-worth Motivation Theory. Based on the findings, it was recommended that schools institute mentoring
programs and educational guidance and curriculum developers strike a balance between norm-referenced and criterion-referenced evaluation.
CHAPTER ONE

INTRODUCTION AND CONTEXT

1.1 Introduction

This chapter focuses on the background to the study, statement of the problem, purpose of the study, objectives and research questions, significance of the study and study assumptions. The theoretical framework based on Martin Covington's Self-Worth Motivation Theory and Carl Rogers' Self Theory of Personality Development is also covered. A conceptual framework is then developed based on the mediation model. The chapter ends with an operational definition of the main terms to be used in this study.

1.2 Background to the Study

Due to the importance of education in any country's development, the decline in learners' interest in school and poor academic achievement is indeed a serious problem. Schools are grappling with students who hate studying, put less time and effort into schoolwork and view school as a nuisance (Osborne, 2001; Trout, 1997). Such students are generally indifferent to academic pursuit and perform poorly and are said to be academically disidentified.

Grades received by students in school are intended to evaluate and communicate the level of a students' academic achievement in class. However, for some students, school grades are a threatening situation because grades may be interpreted as revealing their worth as human beings (Crocker, Karpinski,
Quinn & Chase, 2003). This is especially so since academics are valued in society. Evidence abounds to suggest that students are explicitly motivated to succeed in academics to the extent that they value the domain. For such students, self-worth is staked on their academic performance (Crocker et al., 2003). Such students are prone to changes in academic self-esteem and even the extent to which they feel they belong to school. The instability in academic self-esteem may in turn take a toll on the effort these students invest in academics (Osborne, 2001).

To cope with the threat of poor academic achievement which is a valued domain, some students may discount performance feedback or devalue academic achievement to maintain self-worth (Major & Schmader, 1998). Both processes define academic disidentification which is a defensive detachment of self-worth evaluation from outcomes in the academic domain such that learners' self-worth is not dependent on success or failure in academics (Schmader, Major & Gramzow, 2001). It is a strategy which enables a student to maintain self-worth in the face of personal failure either by decreasing the importance of grades or the academic domain itself (Major & Schmader, 1998; Major, Spencer, Schmader, Wolfe & Crocker, 1998). Consequently, students may withdraw effort from academics with negative implications for academic achievement. Research in USA, France and The Netherlands has focused on how stereotype threat and response to ethnic stigma, race and discrimination and socio-economic status influence academic disidentification of ethnic
minorities (Stephan, Caudroit, Boiche & Sarrazin, 2010; Verkuyten & Thijs, 2004).

Theory also shows how inappropriate attributions are related to individuals' tendency to withdraw effort from a valued domain in the context of failure (Covington, 1984). One line of empirical research has shown that attributions concerning success and failure contribute to academic disidentification (Fishbach, Eyal & Finkelstein, 2010) based on their impact on expectancy of outcomes and emotional consequences (Graham, 1991, as cited in McClain, 2014). For instance, academic failure that is perceived as stable over time can diminish expectancies. Another line of research links attributions to disidentification via reduced achievement motivation when students hold an external locus of control (Graham, 1991, as cited in McClain, 2014). Further empirical research has found a link between external attributions explained in terms of teacher or evaluator bias and reduced academic motivation (Crocker, Voelkl, Testa & Major, 1991). In Africa, research has shown a positive correlation between internal attributions and academic performance (Lema, 1998; Oliwa, 1998). However, there is limited empirical evidence linking causal attributions to academic disidentification for learners experiencing repeated failure.

Research in the area of academic disidentification has also found a link between gender and the type of school students attend and academic disidentification. One line of empirical research has found out that African
American boys disidentify more than girls (Osborne, 1997). This has been explained in terms of the search by Black youth of a sense of identity in non-academically oriented activities related to pop culture and athletics more than females (Cokley & Moore, 2007). This perspective is in line with Ogbu (2003) who cites the 'cool pose' culture as a reason for higher disidentification among boys than girls.

A contradictory perspective has found higher disidentification among girls than boys. This is explained in two ways; stereotype threat (Inzlicht & Ben-Zeev, 2006; Lesko & Corpus, 2006) and paradigmatic trajectories where girls are more likely to devalue the academic domain because of visible gendered career paths provided by their communities (Hill & Vaughan, 2013). Both approaches support the proposition that stereotype threat is evoked when females are in the minority position among males. The third line of research does not find any gender differences in academic disidentification (Steele, 1992). Research on the relationship between type of school and academic disidentification has focused on the relationship between teacher feedback and academic achievement where empirical findings show a negative relationship (Strambler & Weinstein, 2010). However, scarce research exists in Africa on the extent to which gender and type of school predict academic disidentification among secondary school students.

Literature in Kenya in the area of self-worth maintenance and academic outcomes is scarce. At least two broad categories of studies have indirectly
addressed this issue: those focusing on the link between self-worth and academic achievement and those focusing on use of defensive strategies for self-worth protection before and during evaluative situations. The first category of studies has examined how academic self-concept (Kwena, 2007) and internal attributions (Awori, 2010; Oliwa, 1998) determine academic achievement. Findings of these studies have demonstrated that high academic self-concept and internal attributions positively predict academic achievement. However, cited studies have focused on attributions and self-concept independently of each other thus raising the need to simultaneously investigate them in a single study in order to discover the extent to which they predict academic disidentification. The studies have also focused on the broad concept of self-esteem without isolating the academic self which is a major component of overall self-worth for learners. More light needs to be shed on how learners' academic self-esteem suffers in the context of poor academic achievement and self-serving attributions and hence leading to disidentification.

The second category of studies focuses on how students deal with the threat of expected failure by using self-handicapping and defensive pessimism to protect self-worth. Findings from Wawire (2010) indicate that students will adopt defensive strategies to steel themselves from apparent failure by setting unrealistically low or high goals whose achievement or lack thereof respectively reflects positively on self-worth. However, what remains to be done is how students deal with failure after it occurs.
It seems then that there exists a process by which students protect their self-worth in the context of academic failure and inappropriate attributions and that this process is different for male and female students. When students disidentify, they withdraw effort from future tasks with negative implications for academic achievement (Osborne, 1995). Although some research has examined how situations of threat impair performance, findings concerning discounting and devaluing among secondary school students are scarce. This study therefore extends previous research by investigating the extent to which discounting and devaluing may be predicted by similar variables. This is more important since prevailing studies have used narrow samples from ethnic minorities and college contexts in USA and Europe.

For the realisation of crucial education goals of retention and transition, it is important to keep learners in school and interested in academics. Consequently, this study sought to find out the extent to which gender and type of school, academic achievement and causal attributions predict academic disidentification and the extent to which academic self-esteem mediates those relationships.

1.3 Statement of the Problem
Students losing interest in the academic domain is an issue of grave concern in Mombasa County. Evidence of disidentified learners can be inferred from diverse indicators; from high absenteeism, truancy and dropout (Ogega, 2015), to attending school part-time in order to engage in non-academic activities.
(Jones, 2006) and to poor academic achievement. For instance, in the period 2008-2012, 43% of students in Mombasa County scored between D and E in KCSE (Mombasa County Education Office, 2013). Since disidentified students reduce effort investment in academics, they risk academic underachievement which may have adverse implications for their own, county and national development in the long-term. To address the issue of underachievement, absenteeism and truancy and eventual school dropout, there was urgent need to find out why students disidentify with academics.

However, available research on academic disidentification is confined to ethnic minorities in USA and Europe which makes it difficult to generalise the findings to students from the mainstream population in Kenya. Research in Kenya in the area of self-worth maintenance and academic achievement is scarce and disjointed. While some studies have found a correlation between academic self-concept and attributions and academic performance (Kwena, 2007; Oliwa, 2008) another line of research has demonstrated that learners adopt defensive strategies to shield themselves from anticipated failure (Wawire, 2010). What remains to be studied is how learners deal with repeated failure. One of the ways this can be achieved is through a single study encompassing factors that have been studied independently that are hypothesised to lead to academic disidentification. Therefore the central problem of this study was to find out the extent to which gender and type of school, academic achievement and causal attributions predict academic
disidentification; and the extent to which academic self-esteem mediates those relationships among form three students in Mombasa County, Kenya.

1.4 Purpose of the Study

The purpose of the study was to find out the extent to which gender and school type, academic achievement and causal attributions predict academic disidentification and the extent to which academic self-esteem mediates their relationship with disidentification among secondary school students. Specifically, the study aimed to closely examine prediction of two mechanisms underlying academic disidentification, namely, discounting and devaluing.

1.5 Objectives of the Study

The objectives of the study were to:

i. Find out differences in academic disidentification between male and female students in national, sub-county and private secondary schools in Mombasa County.

ii. Identify differences in academic self-esteem between male and female students in national, sub-county and private secondary schools in Mombasa County.

iii. Find out the extent to which academic achievement predicts academic disidentification among secondary school students in Mombasa County.
iv. Determine the extent to which causal attributions predict academic
disidentification among secondary school students in Mombasa
County.

v. Establish the extent to which academic self-esteem mediates the
relationship between gender, type of school, academic achievement
and causal attributions and academic disidentification among
secondary school students in Mombasa County.

1.6 Research Questions

The study was guided by the following research questions:

i. To what extent do male and female students in national, sub-county and
private secondary schools differ in academic disidentification in
Mombasa County?

ii. To what extent do male and female students in national, sub-county and
private secondary schools differ in academic self-esteem in Mombasa
County?

iii. To what extent does academic achievement predict academic
disidentification of students in secondary schools in Mombasa County?

iv. To what extent do causal attributions predict academic disidentification
of students in secondary schools in Mombasa County?

v. To what extent does academic self-esteem mediate the relationship
between gender, type of school, academic achievement and causal
attributions and academic disidentification of students in secondary schools in Mombasa County?

1.7 Assumptions of the Study
The study assumed that academic achievement influences students' self-worth evaluation. It was also assumed that students invest effort on school tests that are valid and interpret feedback in a way that maintains their self-worth. For the mediation process, the study assumed that the relation of independent variables to academic self-esteem is not affected by other variables and that academic self-esteem is not affected by other factors in its relation to academic disidentification. It was further assumed that academic self-esteem is randomly distributed to respondents at each level of the independent variables. However, random sampling attempted to realize this assumption.

1.8 Limitations of the Study
A correlation design was used though the variables under study vary over time. Because the variables were measured at only one point in time, their causal direction cannot be guaranteed. However, interviews with teacher respondents served to provide rich qualitative information for a clearer understanding of the relationships between measured variables. It was also not possible to cover a wider population and therefore the findings may not be generalised beyond the specific population from which the sample was drawn without required caution. Another limitation of the study was the reliance on self-reports, which could be affected by social desirability concerns. Finally, while every effort
was taken in the collection, transcription and summary of interview transcripts, bias in respondents' reports may not be completely ruled out.

1.9 Delimitations of the Study

This study focused on only two background factors (gender and school type), academic achievement and causal attributions and how academic self-esteem mediates their relationship with academic disidentification among form three students in Mombasa County only. Secondly, the sample selected severely limited the ability to generalise to the entire population of secondary schools' students. The sample however is similar in nature to the population of form three students and teachers in other secondary schools and can thus be generalised. Finally, the study did not deal with the consequences of disidentification.

1.10 Significance of the Study

The findings of the study are expected to contribute to the literature on academic disidentification among students in Africa and therefore be a reference point for future researchers. They will provide information to teachers, counsellors and school administrators on students' level of disidentification, academic self-esteem and inappropriate attributions and help in identifying and assisting students through mentoring programs. The findings are also expected to explain poor performance from the perspective of academic disidentification and hence enable stakeholders to use the findings to identify possible interventions. They may also help teachers and curriculum
developers to strike a balance between norm referenced and criterion referenced testing.

1.11 Theoretical Framework

Two theories anchored this study; the Self-worth Motivation Theory (Covington, 1984) and the Self Theory of Personality Development (Rogers, 1959).

a. Self-worth Motivation Theory

The basic premise of the Self-worth Motivation theory (Covington, 1984) is that one's sense of worth depends heavily on one's ability to achieve competitively. The theory suggests that individuals strive to give meaning to their lives by seeking social approval (Covington, 2009) and emphasises feelings of loss of worth that arise from "the disclosure of incompetency" (Covington, 1984, p. 8). The emphasis on equating competence to one's worth has positive and negative consequences.

In Covington's model, one's worth is represented by the performance - self-worth link. An individual's ability is measured in terms of task performance and is valued because of its social desirability. Ability is therefore often confused with worth. According to Covington (2009),

This point gives rise to a powerful reality: To be able is to be worthy, but to do poorly implies incompetence and reason to despair of one's worth (p. 142).
However, since performance is not the only path leading to self-worth affirmation, the model hypothesises that one's perception of ability or hard work in a task may also determine feelings of worth. Ability and effort combine to contribute to one's estimate of self-worth whose perceived lack thereof is associated with worthlessness. This implies that unless one is successful in a valued domain, the individual is disconnected from a major source of self-worth. The theory holds that school achievement is best explained in terms of students' endeavour to maintain a positive self-image of their ability especially in competitive situations.

As students move into secondary school, they experience greater emphasis on competition and performance evaluation and their self-worth increasingly depends on ability to compete for few available opportunities after school. Grades earned in tests assume more meaning. Good grades imply worthiness, while poor marks imply worthlessness. There's therefore a tendency to equate accomplishment with human value.

Students' self-worth in the competitive school situation may be explained by attributions to success and failure, for instance, failure following effort investment is attributed to low ability. These attributions lead to distinct types of students; success-oriented, failure-avoiding and failure-accepting students. Success-oriented students value ability as a tool for achievement and have high expectations of success while failure-avoiding students are highly motivated to avoid failure. This is achieved by minimum investment in effort towards tasks.
However, withholding effort is short-term and "illusory, since their repeated use will finally destroy the will to learn" (Covington, 1984, p. 12). Failure-accepting students on their part neither approach success nor avoid failure but give up in the context of repeated failure. Such students take little credit for success but attribute it to external, uncontrollable factors. They attribute failure to internal and stable factors such as ability and view failure as confirmation of their belief that they lack ability (Covington & Omelich, 1985). Failure-avoiding and failure-accepting students whose sense of ability is threatened may hence attempt to maintain self-worth by engaging in self-protective strategies. This confirms Weiner's model (Weiner, 1985) and the suggestion that individuals may be motivated to distort attributions to serve self-esteem needs (Blaine & Crocker, 1993).

This theory was chosen because it addresses students' contingencies of self-worth in the academic domain. It supports the assertion that students will engage in activities that provide opportunities for success and avoid failure in domains on which they stake their self-worth (Crocker & Park, 2004; Crocker, Luhtanen, Cooper & Bouvrette, 2003; Crocker & Wolfe, 2001). Based on the assumption that basing one's self-worth on academic performance provides a motivator for academic success, the theory helped explain students' motives for protecting their self-worth in the event of failure. It provided a basis for studying the path through which poor grades and inappropriate causal attributions lower learners' self-worth through a reduction in academic self-esteem and thus leading to threats to psychological well-being. Based on this
theory, the study hypothesised that failure-avoiding and failure-accepting students would be highly motivated to discount feedback and devalue academic achievement more than success-oriented students. As Covington (2009) suggests: "These students are motivated, even overly motivated, but for the wrong reasons, that is, the avoidance of failure (p. 145). This study therefore sought to extend findings of other studies (Cokley & Moore, 2007; Crocker et al., 1991; Peterson & Barrett, 1987; Ruggiero & Taylor, 1997) in the area of self-worth protection.

b. Carl Rogers' Self-Theory of Personality Development

According to the Self-theory of Personality Development (Rogers, 1959), self-concept develops based on life experiences, social evaluation and attitudes of significant others and in turn shapes one's view of the world. Rogers believed that humans seek self-actualization as their basic motive, that is, to develop one's capacities to the fullest. For that to happen they must be congruent. Rogers suggested that congruent individuals have high sense of self-worth and on the path to growth while incongruent individuals suffer low self-worth and distort and deny reality in order to protect self-image (Feist & Feist, 2008; McLeod, 2007).

Evaluative situations in school promote social acceptance depending on performance in tests, that is, conditional positive regard. For learners who cannot sustain success every time, conditional positive regard has the effect of leading to incongruence. They consequently struggle to maintain their tattered
self-worth using defense mechanisms for instance, distortion of perception to fit a self-image and denial of threats to self-worth. This theory fits into the study because it forms the basis of understanding learners' motivation for adopting defensive strategies like distortion and ignoring due to external conditions of worth created by poor grades. It is evident from the theory that when learners receive poor grades and attribute them to internal factors the conditional positive regard that follows results in threats to self-worth. This study therefore attempted to find out whether poor grades and inappropriate attributions for success and failure lead to incongruence and adoption of self-worth protection strategies.

1.12 Conceptual Framework

<table>
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<tr>
<th>Predictor variables</th>
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<td>Demographic factors</td>
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<td>Causal attributions</td>
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*Figure 1.1. Academic disidentification model*

Anticipated direction of relationship

*Source: Based on the disidentification hypothesis (Osborne, 1995)*
The conceptual model in Figure 1.1 shows the main variables for the study. Based on the disidentification hypothesis (Osborne, 1995; Steele, 1992) and the mediation model by Baron and Kenny (1986), it was hypothesized that when poor academic achievement and self-serving attributions decrease students' academic self-esteem, their self-worth evaluation is impaired. Since academic self-esteem is a core component of students' self-worth evaluation in school, a need to self-protect is created. Differences in discounting and devaluing were also hypothesised based on gender and type of school via changes in levels of academic self-esteem. Therefore academic self-esteem was hypothesised to mediate the relationship between gender and school type, academic achievement and attributions and both discounting and devaluing processes.

1.13 Operational Definition of Terms

The following were the main terms used in the study:

**Academic achievement**: The average score obtained in three consecutive term examinations.

**Academic disengagement**: Psychological detachment from negative outcomes in the academic domain in which self-worth is contingent in the short term.

**Academic disidentification**: After experiencing repeated academic failure students remove the centrality of the academic domain from their self-evaluation in the long term.

**Academic self-esteem**: Self-perceived competence in schoolwork that contributes to a student's overall evaluation of self-worth.

**Causal attributions**: Students' explanation of the cause of their test scores.
**Contingencies of self-worth:** Areas in which individuals believe success means they are worthwhile and failure means they are worthless.

**Demographic factors:** Students' gender and school currently attending.

**Devaluing:** Reduction in the value attached to the academic domain such that academic achievement is irrelevant in students' self-worth evaluation.

**Discounting:** Reduction in the importance attached to marks scored in tests.

**Failure stereotype:** Situational fear of confirming a negative stereotype about performance by students experiencing repeated failure.

**Gender stereotypes:** Belief that female students cannot perform as much as male students in school.


**Self-serving bias:** Students' tendency to interpret and explain outcomes in ways that have favourable implications for their self-worth.

**Self-worth:** Students' overall feelings of self and group importance. Used synonymously with global self-esteem and self-esteem.
CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

This chapter introduces the concept of academic disidentification and reviews literature concerning the contribution of gender and school type, academic achievement and causal attributions to academic disidentification and the extent to which academic self-esteem mediates the relationships with academic disidentification. A summary of the literature outlining the inconsistencies and gaps in research is presented last.

2.2 The Concept of Academic Disidentification

Academic disidentification is a defensive detachment of self-esteem from outcomes in a particular domain, such that feelings of self-worth are not dependent on success or failure in that domain (Major et al., 1998). In the school situation, this happens when learners redefine their self-worth evaluation in such a way that academic achievement is no longer a basis for that evaluation. Such learners reduce investment of effort on academic tasks and lose interest in school and are at an elevated risk for academic problems (Osborne, 2001). Such behaviour is manifested in reduced study time, careless attitude, poor participation in class and apathy or defeatism in the face of challenge (Trout, 1997). In extreme cases, school dropout is not uncommon. Students who disidentify lack motivation to succeed because there is no contingency between academic outcomes and self-worth evaluation. It is a state
when good performance is not rewarding and poor performance is not punishing (Osborne, 1997).

Disidentification is defined in terms of two distinct psychological processes. The first process involves discounting the validity of feedback one receives (Caudroit, Stephan, Brewer & Le Scanf, 2010; Loose, Regner, Morin & Dumas, 2012; Schmader et al., 2001). In school, students may discount by decreasing the importance attached to grades by considering them as biased indicators of their ability (Regner & Loose, 2006). Discounting has been found to help individuals to protect self-esteem without reducing the value of the valued domain.

The second process involves devaluing the domain such that outcomes in the domain are no longer viewed as relevant or important to how an individual defines the self (Major & Schmader, 1998; Schmader et al., 2001). It involves decreasing the importance of competencies in the threatening domain for the self so that success or failure in the domain does not matter anymore (Loose et al., 2012). The two processes are likely to be evoked in evaluative situations that threaten individuals’ sense of self-worth. Though disidentification can be described in terms of discounting and devaluing, the two have been found to be conceptually and psychometrically distinct, are associated with different predictors and implications and therefore deserve study in order to provide a better understanding of the disidentification process (Schmader et al., 2001; Tougas, Rinfret, Beaton & de la Sabloniere, 2005). A deeper understanding of
the interrelationships of these processes and similarity in their prediction among a sample of secondary school students is therefore important.

Correlational studies (Major & Schmader, 1998; Schmader et al., 2001; Tougas et al., 2005) show that the two processes may not be adopted simultaneously. Instead, they propose a stepwise response where discounting is adopted first. In turn, the more individuals discount feedback and evaluations received the more likely it is to devalue (Nussbaum & Steele, 2007; Regner & Loose, 2006). The suggestion is that individuals gradually embark on the disidentification road, starting from the mechanism that has less significance for one's life to the one that has more (Beaton, Tougas, Rinfret & Monger, 2014).

Research has conceptualised academic disidentification as either situational or chronic (Crocker & Wolfe, 2001; Major et al., 1998; Nussbaum & Steele, 2007). When situational, it serves the purpose of protecting self-esteem temporarily and facilitates persistence. When chronic, it adversely affects achievement through the devaluing of academic performance (Strambler & Weinstein, 2010). However, there are inconsistencies in the literature concerning the benefits or risks of each of these processes on motivation with most findings reporting negative relations (Major & Schmader, 1998; Tougas et al., 2005). Nussbaum and Steele (2007) in their study among 80 undergraduates at Stanford University found that the higher students disengaged from failure feedback, the greater the persistence in the task and hence confirmed that rather than reducing motivation and identification with a
domain over time, situational disengagement, may under some circumstances enhance them. In the study, African Americans under stereotype threat were willing to take more of the same type of task after failure. This might be an indication that when students temporarily disengage their self-evaluation from feedback, they are able to persist. Unfortunately, research shows that when this strategy is employed over time, chronic disengagement results which has consequences for motivation (Major & Schmader, 1998). The prevailing inconsistencies require a study using a sample from the mainstream population that establishes whether chronic disengagement (devaluing) is related to repeated poor academic achievement.

The definition of the disidentification process posits that negative feedback in a domain where an individual's self-worth is staked leads to disidentification only if their self-worth is threatened by a lowered self-evaluation in that domain of worth (Osborne, 2001). Studies in the area have attempted to verify that hypothesis (Regner & Loose, 2006; Stephan et al., 2010; Verkuyten & Thijs, 2004). The challenge of generalising these findings lies in the study samples which were highly selective, some from elite universities in USA (Nussbaum & Steele, 2007) and ethnic minority populations (Regner & Loose, 2006; Stephan et al., 2010; Verkuyten & Thijs, 2004). In the former case, university students are expected to have already chosen a career path and will do anything to remain focused. Such students already valued academic pursuit and were expected to report low disidentification. For the samples from minority populations subject to prejudice, it is expected that findings would be
applicable only to minority groups. Further research using a diverse sample from the mainstream population in Kenya was found necessary to generalise the findings.

In line with the disidentification hypothesis (Osborne, 1995; Steele, 1992), this study hypothesised that repeated failure and internal attributions for poor performance would lead to a reduction in academic self-esteem which in turn would predict discounting. Academic achievement would be positively associated with academic self-esteem and negatively with discounting and devaluing. Academic self-esteem would be negatively related to discounting and devaluing. Since the study focused on academic performance over a period of time, it was hypothesised that repeated poor grades in examinations should be positively associated with devaluing. On the whole, disidentification was expected to help to explain why students show a pattern of weakening academic achievement as they advance through the secondary school years.

2.3 Differences in Academic Disidentification by Gender and Type of School

Seminal works on academic disidentification in USA, France and The Netherlands have treated the concept as a group response to stereotype threat, stigma and perceived discrimination of ethnic minority groups (Major et al., 1998; Regner & Loose, 2006; Schmader et al., 2001; Strambler & Weinstein, 2010; Verkuyten & Thijs, 2004).
Another group of studies have attempted to link students' gender and type of school to academic disidentification using ethnic minority samples from low socio-economic status (Cokley & Moore, 2007; Osborne, 1997). In Osborne's study, respondents' sex, race and socioeconomic status were the background variables in the nationwide study. Data for this study were drawn from the National Education Longitudinal Study (NELS) with specific emphasis on African American, Hispanic and White participants in a two-stage process. Findings show that African American boys disidentified more than their female counterparts. Additionally, Hispanic girls remained the most strongly identified of any group.

Cokley and Moore (2007) used a sample of 274 college students attending a southern, historically Black college in Texas. Findings show that African American men were more likely to devalue academic success than women. One explanation given was that male Black youth derive respect, self-esteem and a sense of identity from non-academically oriented activities related to pop culture and athletics more than females. This is in line with Ogbu (2003) who cites "cool pose" as a plausible reason for Black males' heightened levels of disidentification.

Similar findings were reported by Osborne, Major and Crocker (1992) as cited in Osborne (2001). In that study, self-esteem and affect of Black college students was found to be less reactive to academic feedback than White students even when the feedback was presented as diagnostic of their academic
potential and ability. These findings and other findings from correlational research (Demo & Parker, 1987; Hansford & Hattie, 1982; Jordan, 1981; Lay & Wakstein, 1985; Rosenberg, 1972) as cited in Osborne (2001) all seem to indicate that Black male students are at a higher risk for academic disidentification.

Another perspective to the relationship between disidentification and gender has to do with differences in stereotype threat between male and female students. Studies show that in evaluative situations in mathematics, women contend with the evaluation plus the threatening possibility of confirming the cultural belief that they are inherently less competent than men are at mathematics (Lesko & Corpus, 2006). In their study of 121 undergraduates (68 women and 53 men), Lesko and Corpus found a main effect of gender on performance in the stereotype threat condition where women performed worse than men and in discounting among high-math identified women. This is more evident when women are evaluated among men (Inzlicht & Ben-Zeev, 2000). In the first of two experiments among 72 female undergraduates at Brown University, Inzlicht and Ben-Zeev found out that women in the minority condition attained significantly less accurate scores on the mathematics test as opposed to the verbal test than did females in the same-sex condition. In the second experiment involving 92 male and female students, females in the minority condition scored significantly less accurately than females in the same-sex condition. Importantly, males in the minority condition did not score significantly less accurately than males in the same-sex condition.
Put together, these findings lead to three conclusions. First, females' mathematics performance decreased as the relative number of males in the room increased. Secondly, the presence of males in a group acted as a cue for negative gender stereotype concerning ability and finally, performance of males did not differ significantly whether they were in the minority or same-sex condition. Stereotype threat is thought to be elicited by explicit and implicit cues, such as statements about "typical" gender differences in academic performance. Studies further indicate that women disidentify via the path of self-handicapping, that is, purposely lowering their performance in order to protect their performance in case of failure (Keller, 2002; Smith, 2004, as cited in Lesko & Corpus, 2006).

Emerging literature seeks to explain the relationship between stereotype threat and academic disidentification in terms of paradigmatic trajectories. These are portrayed as "visible career paths provided by a community that shape how individuals negotiate and find meaning in their own experiences" (Hill & Vaughan, 2013, p. 548). According to this perspective, students are highly sensitive to these paradigmatic trajectories and need to know 'what counts' in order to access participation within a community. These trajectories impact on learning practices as students engage in activities that they strategically relate to success. Empirical support has been provided by Hill and Vaughan in a qualitative study using semi-structured interviews of 19 medical students from The University of Manchester, UK. Findings indicated that female students' experiences of surgery were strongly gendered because they were unable to see
or identify with other women in surgery. This explained the reason for fewer female students embarking on careers in surgery.

However, these findings concerning gender differences in academic disidentification contradict Steele (1992) who found no link between gender and academic disengagement of African Americans. Therefore, what remains unanswered is whether gender differences predict academic disidentification not only among ethnic minorities from disadvantaged backgrounds, but also in mainstream populations. The challenge of studying disidentification as a collective response of disadvantaged groups is that it limits the reliability of research findings since one individual is different from the other.

Although research has broadly focused on how societal influences such as prejudice and stereotypes might impact disidentification in minority groups, limited research exists concerning the role of school dynamics. Where students attend school shapes their attitudes towards education. Furthermore, the school environment encompasses many relationships which contribute significantly towards students' success. Student-teacher relationships including how teachers provide feedback and respond to students' emotional and academic needs influence the development of a classroom culture that can facilitate or hinder students' achievement motivation. In a study of 111 students in a high-poverty elementary school in Northern California, Strambler and Weinstein (2010) found out that students who perceived that their teachers gave them negative teacher feedback devalued academics more. The findings point to the
importance of student-teacher relationships in the link between how students perceive their immediate school context and disidentification.

Studies in Kenya have focused on consequences of disidentification in terms of truancy and school dropouts, indiscipline and poor academic outcomes. Of special interest for this study is the reality that many students erratically attend school in the Coast region. In a study of sex tourism that involved fieldwork carried out through 230 interviews, focus group discussions and 160 sex-worker diaries in four districts of Coast province, Kenya, Jones (2006) found out that between 10,000-15,000 girls living in coastal areas of Malindi, Mombasa, Kilifi and Diani aged between 12-18 years are involved in casual sex work. One important finding of the study was that "over 50% of the child sex workers are still attending school but would like to earn additional pocket money" (p. vii). The implication is that secondary school students are more likely to be involved due to disidentifying with school.

Using a random sample from the mainstream population, this study sought to investigate gender differences in discounting and devaluing and examine school contexts that are predictive of the two processes. It was therefore hypothesised that male students would devalue academic achievement more than female students and school environment would be negatively related to discounting and devaluing. In line with research, it was further hypothesised that female students in private schools (all co-educational) would have lower academic self-esteem and consequently, higher levels of disidentification.
2.4 Differences in Academic Self-esteem and Academic Disidentification

Success in the academic domain is an important source of self-worth and failure is indicative of incompetence and loss of worth (Covington, 1984; Osborne, 1995). Students will therefore seek to keep a positive self-image, sometimes with unwanted consequences. Lewis (2006) as cited in Park, Crocker and Kiefer (2007) relates the case of a 16 year-old Japanese boy who set the family house on fire, killing his stepmother, seven year-old brother and five year-old sister because he was ashamed of his poor academic test performance and wanted to avoid being scolded by his "results-obsessed parents" (p. 1503). This example illustrates how academic failure is devastating and the extent to which it can affect self-esteem, emotion, motivation and behaviour through its linkage to self-worth evaluation.

Though not all individuals behave the same way when faced with failure, the Self-worth Theory and relevant literature have shown that the relationship between outcomes and affect depend on the extent to which the domain under scrutiny in important in one's self-evaluation. According to Crocker & Wolfe (2001), the strength of the association between positive affect and self-esteem depends on whether the events that influence affect and self-esteem are relevant to an individual's contingencies of self-worth.

Self-esteem is proposed to fluctuate as a function of perceived successes or setbacks in domains on which self-esteem is contingent (Crocker & Wolfe, 2001). It informs judgments of one's overall worth. In school, it is expected
that students' sense of self-worth is anchored on successes and failures in the academic domain. Evidence abounds that academics is actually important for the self-evaluation of students in school (Crocker et al., 2003). According to Marsh (1986), as cited in Osborne (1995) students tend to rate verbal ability, mathematical ability, general academic performance and problem solving as relatively important. Because all individuals aspire to feel worthy, domains on which self-worth is staked have motivational implications.

Individuals will avoid the decrease in self-esteem that failure may bring in domains in which they have invested their self-worth. When a student attempts to satisfy a contingency of self-worth through being competent by getting good grades in school but fails in the attempt, self-protective mechanisms are put in place. On the one hand, effort may be increased on future tasks, or, on the other hand, may be withdrawn altogether (Carver & Scheier, 1998; Carver, Sutton & Scheier, 2000, as cited in Fishbach & Finkelstein, 2012). Academic self-esteem is therefore positively related to motivation with higher academic self-esteem corresponding to higher motivation in a subsequent task.

Perceived self-esteem in the academic domain is considered a major dimension that students use to evaluate themselves. It is the extent to which one's self-evaluation in academics affects one's overall self-worth evaluation (Osborne, 1995, 1997). When a student discounts or devalues, academic self-esteem is disconnected from overall feelings of self-esteem. This creates a need to self-protect and can be achieved via a range of cognitive responses to failure,
including dismissing the validity of the negative information, derogating the source of the information, providing excuses for failure or affirming the self in another, more rewarding domain (Crocker & Wolfe, 2001).

Ridgers, Fazey and Fairclough (2007) in their study of 192 children in 3 primary schools and 2 secondary schools from rural areas of North Wales and the Midlands region of England found out that the perceived competence of boys in PE was higher and stable than for girls. Girls were therefore more likely to withdraw from PE despite its compulsory status in their curriculum. It follows that students who are more identified with academics should be more motivated to succeed because their self-worth is directly linked to academic performance which is a valued domain (Crocker et al., 2003). Conversely, less identified students should experience lower motivation to succeed because there is no contingency between academic outcomes and self-worth evaluation.

Research has reported a relationship between perceived educational performance and academic self-esteem. According to Verkuyten and Thijs (2004), perceived educational performance predicts academic self-esteem. This finding is supported by longitudinal studies which conclude that the relationship between educational performance and self-esteem is primarily due to the effects of the former on the latter. Major and Schmader (1998) in their study of college students found out that African American students doing poorly in school would delink their self-esteem from the academic domain. Significantly, they report that African American students who were poor
performers in school had higher global self-esteem than their European American counterparts. However, no significant differences in global self-esteem were seen between African American students and European American students who were doing well in school. The findings suggest a positive relationship between poor grades and delinking one's self-worth evaluation from the academic domain when the valued domain's performance is under threat of evaluation. Delinking self-esteem from domains of worth was meant to retain high esteem despite failure. Studies have indeed shown that individuals with high self-esteem are more resilient to negative feedback than those with low self-esteem (Dodgson & Wood, 1998, cited in Park et al., 2007).

In another study, Crocker, Sommers and Luhtanen (2002) conducted a study on 37 college seniors applying to MA and PhD programs (32 used in the analysis) and found out that self-esteem was highly contingent on being competent at school. Additionally, daily reports of self-esteem were higher on days when students were notified that they had been accepted in graduate programs and were lower on days when they were notified of rejections. The study provided the first test of the hypothesis that increases and decreases in daily global self-esteem in response to successes and failures depend on a person's contingencies of self-worth. Osborne (1995) in an investigation using data for the National Education Longitudinal Study (NELS) in the USA found a pattern of weakening correlations over time between achievement and self-esteem for African Americans but not White students. This supports the hypothesis that
self-esteem in a domain of worth fluctuates in response to successes and failures in the domain.

Similar findings have been reported by Crocker and Luhtanen (2003) in their study of the effects of contingencies of self-worth and level of self-esteem in college students on their experience in academic, social and financial problems in the freshman year. Using a sample of 631 students, the study found contingencies of self-worth to significantly predict grade point average (GPA) and academic problems. Findings suggest that students whose self-worth is contingent on academics encounter stress during challenging academic situations, for instance, negative feedback in tests. Such students are likely to seek self-protective strategies.

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. In one such study, Crocker et al. (2002) 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. However, the relationship between feedback and affect seems culture-specific. Studies by Heine and his colleagues (Heine, Kitayama
& Lehman, 2001; Heine, Lehman, Markus & Kitayama, 1999) as cited in Park et al. (2007) and subsequent analyses by Park et al. show that whereas Westerners seek self-enhancement, Asians seek self-criticism and self-improvement and will therefore feel better after receiving negative feedback because such information could be useful for self-improvement. Further research is necessary to confirm the assertion that students with low self-esteem may experience positive affect after negative outcomes.

Though it has been widely accepted that academic self-esteem is affected by grades, another line of research (Major et al., 1998) has reported different findings. In their study among undergraduates at the University of New York at Buffalo, the responses on students' self-esteem did not change when the test was described as racially biased. It was explained that African American students have chronically disengaged their self-esteem from feedback on tests described as intelligence tests more than European American students. Consequently, describing the tests as biased could not change their self-esteem.

This finding by Major et al. (1998) may suggest that African American students' intellectual domain has already been removed from their self-evaluation to the extent that their self-worth is no longer evaluated using tests. It is also likely that racial priming alerted participants of the "biased" test and therefore they expected and prepared for it. The second experiment showed that in the context of failure, African American students had higher self-esteem than European American students if race had been primed but lower self-
esteem than European Americans if race had not been primed. This shows that African Americans attributed to race to deflect failure away from ability and hence raise esteem. It was shown that a relationship existed between academic self-esteem and chronic disengagement. African American students who scored high on the premeasure of chronic disengagement tended to have higher self-esteem following failure feedback than their peers who scored low on this measure. However, scores on the measure of chronic disengagement did not affect the self-esteem of European American students. On the whole, these findings suggest that variations in academic self-esteem may not wholly depend on performance but attributions to performance.

Similar findings to Major et al. (1998) have been provided by Osborne, Major and Crocker (1992) as cited in Osborne (2001) who tested the hypothesis that African American students' affect and self-esteem would be less affected by their scores on a standardised test of intellectual ability than White students. Results show that African American students' affect and self-esteem did not change despite negative or positive feedback. In contrast, White students reported higher positive affect and self-esteem after receiving positive than negative feedback.

Though a number of studies in Kenya have attempted to find reasons for students' poor academic outcomes, few have focused on academic self-esteem. However, related studies have explored relationships between academic self-concept and academic performance. 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. This theme finds parallels in Osborne (1995, 1997). 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. Academic self-concept was also positively correlated with academic performance and class retention and negatively with absenteeism. In another study, Awori (2010) found a moderate correlation between academic achievement and self-esteem.

Cumulatively, these findings seem to point at the central role of self-concept in academic achievement. Additionally, the findings support the disidentification hypothesis, that is, failure affects students' self-evaluation. What remains to be done in line with these findings is examine whether lowered self-evaluation leads to discounting and devaluing in the context of repeated school failure.

Taken together with other research, these findings suggest that students whose self-worth is anchored on academic performance are affected when they get poor grades in school. Consequently, this study hypothesised that; a) academic achievement would predict variations in levels of academic self-esteem; b) attributions would negatively predict academic self-esteem, where internal
attributions would be related to higher academic self-esteem; and c) academic self-esteem would be negatively correlated with discounting and devaluing.

This study was necessary to examine the levels of academic self-esteem as a determinant of academic disidentification among the mainstream student population. This is because majority of studies reviewed from Western countries have focused on academic self-esteem as a response to prejudice and bias. This can be attributed to the ethnic minority samples that were employed. In contrast, other studies have used samples from select populations, for instance, students from elite universities who are expected to have high academic self-esteem. This diminishes the generalizability of such findings. Finally, the sparse research in Kenya in the area of disidentification necessitated this study.

2.5 Academic Achievement and Academic Disidentification

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; Regner & Loose, 2006; Rhodewalt & Vohs, 2005; Schmader et al., 2001). This assertion finds support in Bandura's (1991) Self-efficacy Theory where positive feedback is hypothesised to increase individuals' sense of self-efficacy. In contrast, failure and negative feedback weaken individuals' sense of self-efficacy (Fishbach & Finkelstein, 2012).
Contradictory positions exist in the literature concerning the role of feedback in motivation. Some studies suggest that positive feedback increases motivation when individuals infer they have greater ability to pursue the goal or associate the positive experience with increased goal value. Conversely, positive feedback is counterproductive if it is interpreted to mean that enough effort has already been invested (Clore & Huntsinger, 2007; Martin, Ward, Achee & Wyer, 1993, as cited in Fishbach et al., 2010). On the whole, according to this perspective, positive evaluations increase the desire to pursue a goal and invest effort while negative feedback decreases goal commitment. Other studies have found out that negative feedback increases motivation and persistence when individuals interpret such feedback as signalling insufficient progress and the need for more effort. Individuals therefore persist due to the need to achieve an elusive goal. This is in line with the sunk-cost effect where individuals persist because they are not getting positive feedback on making sufficient progress on a goal (Fishbach & Finkelsten, 2012).

A link between negative feedback, self-esteem and academic disidentification has been found in the literature. Experimental studies on students from elite universities reveal that academic achievement affects self-esteem the more students' self-worth is based on academics. Findings of a study by Crocker et al. (2003) on a sample of 122 Engineering and Psychology majors reported that the effect of bad grades was greater on students with higher academic self-esteem and that bad grades led to less identification with the student's major. This study was designed to find out a) the impact of grades on self-esteem and
feelings of belonging or identification with one's major; b) whether this impact increased the more students based their self-worth on academic achievement; and c) whether the impact is greater for women in engineering. Findings confirmed that poor academic achievement affected self-esteem and that women and engineering majors were more vulnerable to low self-esteem when they achieved poorly if they were highly contingent on academics. It was also found that women in engineering showed significantly bigger drops in self-esteem when they achieved poorly. The study also showed that grades influenced affect and was greater for students who were highly contingent on academics. Finally, poor achievement was associated with disidentification and the effect was higher for students who identified with their major.

In a similar study by Brunstein and Gollwitzer (1996) on 96 medical students from the University of Erlangen, Germany, which involved manipulation of treatment and of feedback, those exposed to failure indicated that they felt less confident. The experiment also revealed that failure was a motivating factor if it was on a task important to the individual's self-worth as physicians. These findings suggest that poor performance will only lead to disidentification when self-esteem in the relevant domain is affected. In the study, high self-esteem, positive affect and identification with the domain of interest increased on days when grades were good. Additionally, disidentification on bad-grade days was stronger for academically contingent students.
In Major and Schmader's (1998) study, students with low GPAs reported higher levels of disengagement than did students with high GPAs and said that doing well in the academic domain was significantly less important to them than did students with high GPAs. This finding points to the fact that poor performance may lead students to discount feedback but not devalue the academic domain and is consistent with the assertion that disidentification is a response to perceived threat in a given domain. This line of research suggests that grades affect the psychological states of students, more so, those who have staked their self-worth on performances in the academic domain. This perspective is consistent with other studies (Crocker et al., 2002) which suggest that academically contingent students are affected more by failure which indicates to them that they are worthless. Such students react to failure by using strategies that reduce the impact of the bad grades. They achieve this by disidentifying from the domain in which their "worthlessness" has been exposed (Crocker, Major & Steele, 1998; Crocker & Wolfe, 2001).

An interesting perspective is evident in the literature. In the Major and Schmader (1998) study, students with high GPAs were also found to discount the validity of tests more than did students with low GPAs. Emerging literature sheds new light on the finding (Brewer, Selby, Linder & Petitpas, 1999; Leitner, Hehman, Deegan & Jones, 2014). It is proposed that individuals try to augment self-esteem whenever it is threatened below a certain threshold, but this motivation ceases once self-esteem is restored. Similarly, they argue that disidentification protects self-esteem from negative feedback but greater
identification does not augment the effect of positive feedback on self-esteem. These perspectives seem to point out that high performing students' academic self-esteem is at its highest and identification cannot increase it. It is only by disidentifying that they are able to maintain self-esteem. These are the students in school who perform higher than external evaluation can provide positive feedback.

While many studies have correlated grades with discounting, some seem to suggest that there exist race differences in the process. Findings by Schmader et al. (2001) on 676 undergraduates at the University of California show that discounting and devaluing were predicted by different factors. Whereas among European American students, beliefs about injustice were found to have little relation to the tendency to discount intellectual tests or to devalue academic success, African American students were found to discount more due to beliefs about ethnic injustice. Among the Latino students, discounting and not devaluing was associated with failure in tests and perceptions of ethnic injustice. This seems to suggest that grades affect students' discounting and devaluing in context-specific pathways.

Research also seems to suggest that the relationship between feedback and self-protection is through its affective consequences. This has been described as the underlying mechanism by which feedback influences behaviour (Baumeister, Vohs, De Wall, & Zhang, 2007, as cited in Fishbach et al., 2010). Feedback has been found to elicit positive affect which is in turn implicitly associated
with the goal and thus increases the perceived value of the goal. The affective consequences thus act as a reward for behaviour. Contrastingly, negative feedback that elicits negative feelings can undermine motivation if the negative feelings are associated with goal-related stimuli and evoke avoidance motivation (Fishbach & Finkelstein, 2012).

Another perspective in the literature suggests that the level at which feedback accompanying performance is given determines persistence or giving up. This feedback comes in the form of praise. While in some instances praise has led to improved performance, in some learners it has decreased performance. In other learners, praise has had no effect (Mueller & Dweck, 1998). In two experiments done on samples of 145 British school children and 114 social science undergraduates respectively to examine the effects of praise on how people deal with subsequent failures, Skipper and Douglas (2011) found out that success in tests led to higher intentions to persist. However, differences were found between person (direct praise and criticism of the learner), process (comments focusing on the person's effort or strategies) and no feedback when students began to fail. Specifically, respondents in the person feedback condition rated lowest on affect and persistence and showed a more negative response to a single failure than those who received process or no praise. Results also showed that affect and persistence decreased overall after one failure and were not enhanced by process or objective performance feedback once respondents experienced a second failure.
These findings support Kamins and Dweck (1999) who argue that person feedback fosters a sense of contingent self-worth, where children only see themselves as valued when they pass. On the one hand, while person praise leads children to interpret their achievements in trait terms, process praise focuses more on effort attributions for outcomes. It follows that students exposed to person praise see poor outcomes as related to stable attributes such as ability. Since students are likely to encounter repeated failure in their academic lives, they develop mechanisms to self-protect.

In schools, it is almost normal practice for teachers to write comments on examination scripts after giving objective feedback. This study therefore hypothesised that students who receive person feedback following objective feedback will discount more than those who receive process feedback because of the contingency to self-worth that person feedback elicits.

Research in Kenya on the relationship between academic achievement and disidentification is scarce. Available research has attempted to focus on relationships between academic achievement and academic self-concept (Kwena, 2007). The scarce research and contradictory positions in the literature are cause for further study. Unfortunately, available research in the USA and Europe is limited by the use of modest and selective samples. Additionally, most of the studies are experimental which limits their applicability in natural settings. Finally, some samples were derived among stigmatized populations which present challenges in generalising such findings. Using a sample from
the mainstream population, this study sought to determine the extent to which academic achievement predicts academic disidentification among students in Mombasa County.

2.6 Causal Attributions and Academic Disidentification

According to the Self-worth Theory (Covington, 1984; Covington & Omelich, 1985), how a student approaches success and failure plays a key role in the cognitive consequences that follow performance in the context of failure. For instance, attributing outcomes to controllable causes such as effort increases motivation and perseverance. In contrast, attributing outcomes to stable, uncontrollable causes such as ability weakens motivation and is likely to be highly correlated with disidentification. It follows that a student who receives positive feedback on academic performance will invest more effort if he attributes success to internal and unstable causes such as effort. The same student will also be motivated if he receives negative feedback and attributes it to an external factor like test difficulty or an internal factor that is unstable like lack of effort.

Overall, this approach suggests a two-edged effect of feedback depending on one's attributions of success and failure. While success-oriented students focus on ability as the source of success, failure-avoiding and failure-accepting students believe that success is determined by external, uncontrollable factors. When faced by failure in school, the latter attribute it to low ability. The threat to self-worth resulting from such attributions leads learners to develop self-
serving biases by redefining their self-worth such that success and failure in the academic domain becomes irrelevant in self-worth evaluation.

When positive and negative events occur, individuals react in line with what they perceive as the causes of outcomes. According to Blaine and Crocker (1993), individuals may draw inferences about those events, estimate the degree of control over those events and may have cognitive reactions such as evaluating the credibility of the information and affective reactions to the information or source of information. It is likely that the reactions will be self-serving, that is, interpreted for favourable implications to the self.

This perspective draws from the work of Carol Dweck and her colleagues (Dweck, 1999; Dweck & Leggett, 1988; Elliot & Dweck, 1988, cited in Elliot & Dweck, 2005) who differentiate between learners who hold entity and incremental views of their ability. The fixed entity students pursue performance goals of receiving feedback and outcomes while the incremental entity student pursues learning goals of learning new things or improving upon an existing skill. While the fixed entity student internalises responsibility for positive and negative outcomes, the incremental entity student attributes negative outcomes to unstable causes. Failure for the fixed entity student is associated with attributions to fixed causes and may motivate self-defensive strategies such as discounting and devaluing. This is in line with the work of Miller and Ross (1975) as cited in Blaine and Crocker (1993) who differentiate between self-enhancing and self-protecting attributional biases.
Earlier research on the mechanisms through which attributions influence self-esteem maintenance focused on the link between outcomes, attributions and affect (McFarland & Ross, 1982). In an experimental study on a sample of 53 undergraduates at the University of Waterloo, the study found out that participants attributed failure to task factors and that subjects in the success conditions experienced more pleasant affect than subjects in the failure conditions. Additionally, subjects who attributed failure to the task reported more pleasant affect than subjects who attributed failure to lack of ability.

These findings suggest that affects closely related to self-esteem were influenced by attributions after both success and failure. Consistent with the Self-worth Theory, findings indicate that attributing success internally tends to be associated with positive affect, whereas attributing failure to self is associated with negative affect. This has been argued to be enough evidence to suggest that individuals will distort their attributions following success or failure to maintain or enhance self-esteem and increase affect. This is in line with theories of emotion and empirical research which indicate that attributions for success and failure have consequences for self-esteem and affect. For instance, Weiner's Attributional Model of Achievement Motivation relates internal attributions for success with increased pride, self-satisfaction and state self-esteem. Similarly, external attributions for failure result in higher feelings of self-esteem (Weiner, 1985). This confirms the assertion that individuals may be led to distort attributions to self-protect (Blaine & Crocker, 1993).
Studies on the contribution of causal attributions on academic disidentification have focused on the influence of stigma, ethnic group identity and negative stereotypes on self-esteem (Cokley & Moore, 2007). While some studies have found that members of stigmatized groups exposed to societal devaluation in the form of negative stereotypes, perceived ethnic injustice and prejudice may cope by disengaging from the domain, other studies report that adversity may indeed lead to persistence (Crocker & Major, 1989; Nussbaum & Steele, 2007).

Research has found that members of disadvantaged groups attribute failure to external sources in order to protect self-worth. In an experimental study of 77 undergraduate students at the State University of New York at Buffalo, USA, it was found out that African American students attributed their performance to racial disadvantage and test bias (Major et al., 1998). In this study, African American students were significantly more likely than European American students to attribute their performance to racial disadvantage. Additionally, irrespective of race, participants who were told that the test appeared to be biased against certain racial groups were more likely to attribute their own performance to racial disadvantage. Overall, African American students tended to attribute performance to test bias.

In another study among Turkish immigrant students in The Netherlands, Verkuyten and Thijs (2004) found out that perceived discrimination moderated the relationship between academic self-esteem and overall self-worth. This means that students facing discrimination and negative stereotypes about
intellectual abilities are more likely to attribute failure to external sources to protect self-worth.

A number of studies have provided support for the hypothesis that attributions shape individuals' perceptions of causes of outcomes (Crocker et al., 1991; Ruggiero & Taylor, 1997). For the stigmatised, prejudice is a plausible reason for failure. These studies show that the perception that outcomes result from biased procedures or are out of the individual's control (Major, Feinstein & Crocker, 1994) weakens the belief that the outcomes are deserved and hence leads people to disengage their self-esteem from the particular feedback irrespective of its importance (Major & Schmader, 1998).

However, McClure, Meyer, Garisch, Fischer, Weir and Walkey (2011) provide a distinctly different cross-cultural perspective to the assertion by Major et al., (1994) in their study among 5333 students in New Zealand. Findings indicated that students invoked more luck for their best marks than worst marks, that is, success was attributed externally. This was explained as the "Tall Poppy" culture where people who flourish academically are "cut down" (p. 77), rather than being praised. In such culture, those who attribute own success to internal and stable causes are seen to be arrogant and self-effacing. This may indicate that students may discount feedback as an adaptive strategy to drive attention away from their ability. This viewpoint finds support in the study by Peterson and Barrett (1987). Findings from their study of the explanatory style of 87 university students (59 women and 28 men) at Virginia Tech, USA, suggest
that poor performing students attributed failure internally while high performing students attributed success externally.

Contrary findings (Crocker & Major, 1989; Nussbaum & Steele, 2007) demonstrate that for stigmatized individuals, self-esteem is increased when attributing negative feedback to external causes and positive feedback to internal causes respectively. Nussbaum and Steele provide empirical evidence to support the position. In their experimental study, no differences were evident between the two groups on devaluing of academics. Though Nussbaum and Steele present interesting findings, the modest sample of students from an elite university whose students are expected to be highly identified with academics limits the applicability of the findings. There is therefore need for more studies using secondary school students from the mainstream population in a natural setting.

In line with Crocker and Major (1989), it was hypothesised that for students who were admitted to secondary school with very low marks, attributing negative outcomes to external causes should protect self-esteem. It was further hypothesized that poor students would regard teachers' feedback as a form of prejudice towards them. Hence, such students would make external attributions for negative outcomes as a way of confirming teachers' self-fulfilling prophecy of their lack of ability.
Empirical evidence in support of this position is provided in an experimental study by Crocker et al. (1991) where female university students undertaking an Introductory Psychology course were evaluated positively or negatively on an essay by a male evaluator. One group was informed that the evaluator was prejudiced against women while the other group was not informed. Findings revealed that women who received negative feedback from a nonprejudiced evaluator showed more decrease in self-esteem compared to those who received feedback from an evaluator who was prejudiced against women. The results provided evidence that attributing negative outcomes to external causes (prejudice) had self-protective consequences. Respondents discounted the evaluator's feedback by attributing it to the evaluator's prejudice. It was therefore hypothesised that students who had experienced repeated failure would have external attributions. The challenge of the study by Crocker et al. was its use of a marginalised sample in the second experiment where Black students were evaluated by a White evaluator. This limits the generalisation of study findings to the mainstream population.

No specific studies in Kenya on the relationship between attributions and the self-protection mechanisms of discounting and devaluing are available. However, some studies have attempted to link attributions with other self-defensive mechanisms and academic achievement. Wawire (2010) using an exploratory and correlational design on a sample of 400 respondents, found ability attributions for success and failure, effort attributions for success and failure and external attributions for failure to be significant predictors of self-
handicapping. In line with the core hypothesis of this study, students tended to attribute failure to causes that minimised the implications that such failure held for their ability and attributed success to factors that increased perceptions of their ability.

Onduso (2010) using a causal-comparative design on 120 students 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. Gender differences in attributions were found with more boys than girls attributing success and failure to internal factors. Oliwa (1998) found an insignificant contribution of locus of control on academic performance though majority of the sample held external attributions. Lema (1998) found a significant relationship between internal attributions and high scores on tests. Gender differences were found in attributing causality with more boys than girls attributing performance to internal locus.

Taken together, these findings suggest that internal attributions are positively correlated with academic performance and that internal attributions have consequences for self-esteem maintenance. This study was therefore designed to determine whether, a) students low in academic achievement have external and stable attributions for outcomes in the academic domain; b) levels of academic self-esteem vary as a function of external and stable as opposed to
internal and unstable attributions; and c) locus and stability attributions determine differences in discounting and devaluing.

The challenge of generalising findings from Western countries stems from the narrow samples used. Most of the samples are drawn from marginalised groups while a few are highly select samples from university most of whom individually value academics. African Americans have historically been a stigmatised group and hence present challenges to applicability among mainstream populations where race is not a discriminatory criterion. Though studies from Kenya have been reviewed, none of the studies included a measure of the academic self to effectively predict whether any mediated relationships exist. Therefore, this study sought to find out the extent to which attributions predict academic disidentification among students in national, sub-county and private schools in Mombasa County.

**2.7 Mediation of Academic Self-esteem on Academic Disidentification**

Students are motivated to get good grades that will verify their valued self-images. Steele (1997) suggests that a decrease in academic self-esteem due to poor grades is likely to weaken the students' self-worth which necessitates self-protection. This means that academic self-esteem mediates the relationship between grades and discounting and devaluing.

The inclusion of academic self-esteem in mediation studies enables one to examine the disidentification hypothesis more fully. The reason for using
global self-worth and its related parts derives from evidence from large scale-studies which has shown that the relationship between educational performance and global self-worth is primarily due to the effects of the former on the latter (Rosenberg, Schooler & Schoenbach, 1989; Ross & Broh, 2000) as cited in Verkuyten and Thijs (2004). It is hypothesised that under conditions of poor performance in the academic domain, the relationship between academic self-esteem and global self-worth is affected. In turn, one disidentifies to maintain one's worth in the face of such failure. It therefore leads to the suggestion that it is not failure that causes disidentification, but the drop in academic self-esteem that follows.

Studies have shown that gender and type of school (Cokley & Moore, 2007; Strambler & Weinstein, 2010), grades (Schmader et al., 2001; Verkuyten & Thijs, 2004) and attributions (Crocker et al., 1991; Wawire, 2010) predict the use of self-protective strategies by students. In line with the disidentification hypothesis, a model was proposed in which a threat to students' self-worth through poor grades and inappropriate attributions creates a need to self-protect, leading to discounting of feedback. It was also hypothesised that repeated failure would predict devaluing. It was thus expected that: a) academic achievement would be negatively associated with discounting and devaluing, b) internal attributions for failure and external attributions for success would be positively associated with discounting and devaluing c) academic achievement and internal attributions would be positively related to academic self-esteem where high achievement and internal attributions are
associated with higher feelings of esteem, with poor achievement related to low academic self-esteem, and d) academic self-esteem would be negatively associated with discounting and devaluing, with low academic self-esteem leading to higher discounting and devaluing.

Using the mediation model (Baron & Kenny, 1986), research on the mediation of academic self-esteem has been done mainly among two distinct types of samples; ethnic minorities and elite university students. Regner and Loose (2006) found out that academic self-esteem mediated the influence of grades on academic disengagement of 183 North African French seventh and eighth graders from low socio-economic backgrounds. Similar findings were reported by Stephan et al. (2010) whose study among students in 7th, 8th and 9th grades in France confirmed that perceived competence mediates the relationship between grades and discounting.

In the study by Verkuyten and Thijs (2004) among Turkish immigrants in The Netherlands, academic self-esteem was found to mediate the relationship between perceived educational performance and feelings of global self-worth. In another study, Nussbaum and Steele (2007) in their study of situational disengagement and persistence among a sample of 80 undergraduates from Stanford University found out that disengagement acted as a mediator of race on persistence only when participants had done poorly on an examination that was primed as important to their self-definition. These studies support the hypothesis that for an unpleasant experience to lead to disidentification,
individuals' self-evaluation in a domain of interest must be affected by the reduction in self-esteem that follows.

The disidentification hypothesis has also found support in domains unrelated to academics. Tougas et al. (2005) found out that policewomen discounted feedback due to reduced self-esteem resulting from personal relative deprivation. Caudroit et al. (2010) in their study of individual predictors of psychological disengagement from sport during a competitive event found out that physical self-worth mediated the relationship between perceived goal attainment and discounting. Ommundsen and Vaglum (1997) in their study of 223 boys in Oslo, Norway, found out that low perceived soccer competence mediated the relationship between low actual soccer competence and increased drop out within the group of older players.

The scarcity of mediation research in Kenya necessitated this study. Though studies in Kenya have focused on constructs related to self-esteem, no known studies have adopted the mediation model in investigating such relationships. Consequently, this study sought to establish the extent to which academic self-esteem mediates the relationship between gender and type of school, academic achievement and causal attributions and academic disidentification among secondary school students in Mombasa County.
2.8 Summary of Review of Related Literature

This chapter reviewed literature on the contribution of gender and school type, academic achievement and causal attributions on academic disidentification and the mediating role of academic self-esteem. Literature reviewed shows academic disidentification to be a group response to stereotype threat and stigma among ethnic minorities. Gender differences in academic disidentification were found with more males than females devaluing academic achievement. It is however unclear if these gender differences are linked to the cultural background of the narrow samples that have been employed. More research is required using a sample from the mainstream population in order to generalise the findings. While a limited number of studies have attempted to test the disidentification hypothesis, what remains unexplored to date is consistency concerning the mediating role of academic self-esteem on the relationship between causal attributions and academic disidentification. Further, lack of consensus persists on whether negative feedback leads to persistence or academic disidentification. Based on existing evidence, it is difficult to estimate whether feedback predicts academic disidentification or the direction and magnitude of the prediction. Finally, since available research comes from USA, France and The Netherlands based on modest and selective samples it presents challenges in generalising findings to students in Kenya. This study therefore sought to establish the extent to which gender, school type, academic achievement and causal attributions predict academic disidentification mediated by academic self-esteem.
CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This chapter discusses the methodology that was employed in the study. It focuses on research design and locale of the study, variables of the study, target population, sampling procedures and sample size, and data collection instruments and data analysis.

3.2 Research Design and Locale

3.2.1 Research Design

The study used both exploratory and correlational research designs to investigate predictors of academic disidentification. Exploratory design was found appropriate in collecting qualitative data to fully appreciate the context of disidentification. By using exploratory design, no assumptions or models were postulated, but relationships and patterns in the data were explored.

Correlational research design was preferred because it investigates the relationships among various psychological variables. It is used when it is not possible or ethical to manipulate the variable of interest. Instead, the variables are examined to determine if they are related and, if so, the direction and magnitude of that relationship. The main purpose of correlational research is to determine, through application of a quantitative statistical analysis, whether a
relationship exists between the variables under investigation (Lodico, Spaulding & Voegtle, 2010; Stangor, 2006). This enables a researcher to make predictions based on these relationships, but not statements of causality. Though the question of causality cannot be tested definitively in correlational designs, the relationships obtained are often used to support potential causal interpretations (Howitt & Kramer, 2011). The research design was also preferred because it allows for multiple ways of data collection and analysis, both quantitative and qualitative.

**Variables**

The study measured the following variables:

a) Academic achievement: Academic achievement was defined as the mean score in all subjects in three successive term examinations. The mean scores were converted into T-scores for comparison across the sample. Three groups were created on the basis of performance on a scale of 20-80, that is, low (20-39), average (40-59), and high achievement (60-80).

b) Gender and school type were categorical variables. Gender was measured at two levels, male and female. School type was measured at three levels, that is, national, sub-county, and private schools.

c) Causal attributions: This was defined as how learners explain the cause of their grades on the basis of effort, ability, luck and task difficulty. Attributions were measured by the Achievement subscale of the Multidimensional Multiattributinal Causality Scale (MMCS). High scores for each attribution indicated preference for the attribution.
d) Academic self-esteem was operationalised as students' feelings of competence in academic work and was measured using the Performance Self-esteem subscale of the State Self-esteem Scale (Heatherton & Polivy, 1991). It was the mediating variable. High scores on the scale indicated high academic self-esteem.

e) Academic disidentification was defined as loss of interest in academic work and was operationalised as discounting and devaluing and measured using the Intellectual Engagement Inventory (Major & Schmader, 1998). High scores for each subscale indicated higher levels of discounting and devaluing respectively. The scores on each subscale ranged between 4 and 20. Scores between 4 and 12 and 13 and 20 were considered low and high discounting and devaluing respectively. This was the outcome variable.

3.2.2 Locale

The study was carried out in secondary schools in Mvita Sub-county of Mombasa County, which comprises the entire Mombasa Island, an urban location. Mombasa County is situated in the South Eastern part of the former Coast Province and covers an area of 229.7 km². It borders Kilifi County to the North, Kwale County to the South West and the Indian Ocean to the East. Administratively, the county is divided into four sub-counties namely, Mvita, Kisauni, Changamwe and Likoni. Mombasa County was chosen for this study because of the presence of major indicators of disidentified learners; from high levels of absenteeism, truancy and dropout (Ogega, 2015) to erratic schooling
by students in order to attend to leisure activities (Jones, 2006); and declining rates of academic achievement in the KCSE. For instance, in 2012 Mombasa County was ranked 39 out of 47 with a performance index of 26.59 (Mombasa County Education Office, 2013). Truancy, absenteeism and school dropout were hypothesised to be results of academic disidentification and were considered to be serious problems that demanded urgent attention through research. The diverse student population in Mombasa County was further motivation for the choice of this location since it was expected to generate stable observations on academic disidentification.

3.3 Population
The study population comprised all form three secondary school students in Mvita Sub-county of Mombasa County. A population of 2727 form three students from 27 schools was obtained from the County Education Office, Mombasa. It was hypothesised that at form three, a student should have centred their self-worth around the academic domain since they were next in line to sit the national examinations and hence were expected to apply consistent effort in school tests. Students in private schools were targeted because private schools operate outside of government-regulated admission requirements. The study also targeted all form three class teachers in the Sub-county.
3.4 Sampling Techniques and Sample Size Determination

3.4.1 Sampling Techniques

The study employed three sampling techniques; purposive, stratified and simple random sampling. Purposive sampling was used to select Mvita Sub-county from among the four sub-counties that comprise Mombasa County. Mvita Sub-county was selected because it is the most centrally located of the other sub-counties and therefore attracts a diverse student population and also has the highest number of secondary schools. One national and three private schools were also purposively sampled. The national school is the only one in the Sub-county. One private school was picked from among the group that had a form three student population of over 70 while the other two had below 70 students. Stratified sampling was used to classify schools into private and public and further into national, and sub-county schools for the public schools' strata. It was used because subgroups were critical to creating a sample that was more representative of the population (Lodico et al., 2006). Simple random sampling was used to select eight sub-county schools by gender using the lottery method. A total of 12 schools were selected representing 44% of all schools in the sub-county.

The lottery method was used to pick a sample of 453 students from the class lists provided by the class teachers. Forty, 39 and 30 respondents were targeted each from national, sub-county and two private schools respectively. One private school that had higher enrolment was purposively allocated 41 respondents who were then randomly sampled using the lottery method.
Numbers within the targeted range were written on paper folds and the rest left blank. The total number of paper folds was equivalent to the total number of form three students in each selected school. For instance, for the national school, 170 paper folds were placed in the tray; 40 had numbers in the range 1-40 and 130 were left blank. They were then mixed and all form three students invited to pick a folded paper from the tray. Those who picked blank papers were requested to leave while those whose papers had numbers remained to complete the instrument. One hundred students were picked from private schools, 313 from sub-county schools and 40 from the national school. Additionally, 12 class teachers were purposively selected for the study from the schools selected.

### 3.4.2 Sample Size Determination

Sample size was calculated using the formula by Yamane (1967) in Israel (1992).

\[
n = \frac{N}{1 + N(e)^2}
\]

Where, \(N\) is the population size and \(e\) is the level of precision for the study. In addition, 30% of the sample was added to compensate for nonresponse (Israel, 1992). This formula was preferred because of the need to arrive at a sample size from a finite population. Proportionate stratified sampling was employed to allocate respondents in public and private schools to ensure that the size of the sample drawn from each stratum was proportional to the relative size of that stratum in the population (Stangor, 2011). The sampling frame is presented.
in Table 3.1. Table 3.1 indicates that a total of 465 respondents were sampled for the study consisting of 453 students and 12 teachers.

**Table 3.1**

*Sampling frame*

<table>
<thead>
<tr>
<th>Type of school</th>
<th>No. of schools</th>
<th>Population of schools</th>
<th>Sample of schools</th>
<th>Sample per sch.</th>
<th>Gender</th>
<th>Teachers</th>
<th>Total</th>
</tr>
</thead>
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<td>1</td>
<td>170</td>
<td>1</td>
<td>40</td>
<td>0</td>
<td>40</td>
<td>1</td>
</tr>
<tr>
<td>Sc</td>
<td>14</td>
<td>1948</td>
<td>8</td>
<td>39</td>
<td>154</td>
<td>157</td>
<td>8</td>
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<td>381</td>
<td>1</td>
<td>41</td>
<td>22</td>
<td>20</td>
<td>1</td>
</tr>
<tr>
<td>Private B</td>
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<td>228</td>
<td>2</td>
<td>30</td>
<td>30</td>
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<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>27</td>
<td>2727</td>
<td>12</td>
<td>453</td>
<td>206</td>
<td>247</td>
<td>12</td>
</tr>
</tbody>
</table>

*Note:* Sc = Sub-county; Private A: Enrolment ≥ 70; Private B: Enrolment ≤ 70

**Source:** County Education Office, Mombasa

### 3.5 Research Instruments

Three instruments were used in this study; document analysis, a questionnaire and semi-structured interview.

#### 3.5.1 Document Analysis

Teachers in charge of academics in respective schools were requested to provide students' achievement records for three consecutive terms. The mean score of each student in three consecutive term tests was then converted into a T-score and arranged on a scale ranging from 20-80; poor (20-39), average (40-59) and high performance (60-80). The decision to use teacher ratings of
students' academic achievement was informed by the use of grades in related studies (Regner & Loose, 2006; Stephan et al., 2010; Strambler & Weinstein, 2010). In all the cited studies, grades were taken from school records and an overall mean score computed.

3.5.2 Questionnaire

The questionnaire was used to collect information concerning students' demographic information, academic self-esteem, causal attributions and disidentification. To achieve this objective, the questionnaire was divided into three main sections. The introduction section required the respondent's consent to participate in the study and a further three items on respondents' gender, school admission number and name of school. The school admission number was to be used in document analysis. Section A consisted of items which sought information on respondents' academic self-esteem using the Performance Self-esteem sub-scale of the State Self-esteem Scale. Section B consisted of items measuring respondents' attributions using the achievement sub-scale of the Multidimensional-Multiattributional Causality Scale. Section C measured respondents' disidentification using the Intellectual Engagement Inventory.

a. Performance Self-esteem Subscale of the State Self-esteem Scale

Students' academic self-esteem was measured using the Performance Self-esteem sub-scale of the State Self-esteem scale (Heatherton & Polivy, 1991). Use of the instrument is governed by the conditions given by the developers of the instrument, that is, correct acknowledgement when used. The researcher
committed himself to adhere to the conditions of use by correctly acknowledging the source. The original instrument is a 20-item scale that measures a participant's self-esteem at a given point in time. The 20 items are subdivided into three components of self-esteem: performance, social and appearance. For this study, the 7-item performance subscale was used to measure academic self-esteem on a 5-point Likert scale of 1 (Strongly disagree) to 5 (Strongly agree). Scores could therefore range from seven to 35. A high score indicated high academic self-esteem. From the scores, high and low academic self-esteem groups were created on the basis of a median split of scores on the academic self-esteem measure (Median = 22). The original instrument was tested on 428 undergraduates enrolled in Erindale College of the University of Toronto ranging from 17 to 57 years. For this study, the instrument was pretested on a sample of 33 Form Three students (14 male and 19 female) from the only public mixed secondary school in the sub-county. This sample was not included in the final study. Pre-testing was done to test instruments' validity and reliability given that they were developed in and for a different culture. Items from the original instrument were then adapted to suit the level of respondents. All items which focused on general performance were adapted to reflect class performance. For instance, on items 1 and 18 on the original scale, the word 'academic' was added while the word 'class' was added on items 9, 14 and 19 in the original scale. The word 'rattled' on item 4 in the original scale was changed to 'disturbed' for clarity of meaning.
Content validity of the instrument was ensured through peer review. General items on performance in the original instrument were made more specific by relating them directly to the academic domain on the advice of supervisors. The reliability of the original instrument was given by Heatherton and Polivy (1991) in terms of the internal consistency of the items in the three sub-scales and the overall scale. Table 3.2 gives a comparison of the inter-item correlation and reliability coefficient of the original instrument and the pilot study.

**Table 3.2**

*Inter-item Correlations in the Performance Self-esteem Subscale*

<table>
<thead>
<tr>
<th>Item</th>
<th>$r_1$</th>
<th>$r_2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>I feel confident about my academic abilities</td>
<td>0.64</td>
<td>0.40</td>
</tr>
<tr>
<td>I feel frustrated or disturbed about my performance - R</td>
<td>0.54</td>
<td>0.34</td>
</tr>
<tr>
<td>I feel that I am having trouble understanding things I read - R</td>
<td>0.41</td>
<td>0.46</td>
</tr>
<tr>
<td>I feel smart as others in class</td>
<td>0.55</td>
<td>0.45</td>
</tr>
<tr>
<td>I feel confident that I understand things in class</td>
<td>0.52</td>
<td>0.47</td>
</tr>
<tr>
<td>I feel that I have less academic ability right now than others - R</td>
<td>0.61</td>
<td>0.49</td>
</tr>
<tr>
<td>I feel like I am not doing well in class - R</td>
<td>0.60</td>
<td>0.48</td>
</tr>
<tr>
<td>Overall coefficient alpha</td>
<td>0.92</td>
<td>0.67</td>
</tr>
</tbody>
</table>

*Note:* $r_1$ = corrected inter-item correlations of original instrument, $r_2$ = corrected inter-item correlations of pilot study, R = Reverse scored items

The instrument returned an overall alpha coefficient of 0.67 against 0.92 reported by the original instrument (Heatherton & Polivy, 1991). It was considered appropriate because of the cultural as well as grade level differences between the samples used; secondary school students and university students respectively. Similar explanations were given for differences in the inter-item correlations between the pilot study and the original study. The instrument was preferred because of its wide usage in
empirical studies employing correlational design (Loose et al., 2012; Regner & Loose, 2006). For instance, the study by Regner and Loose among North African French adolescents in France returned a Cronbach alpha of 0.78 for this scale.

b. Multidimensional-Multiattributional Causality Scale

This scale developed by Lefcourt, von Baeyer, Ware and Cox (1979) was employed to measure students’ causal attributions with respect to locus and stability attributions. This study used the Achievement sub-section of the original instrument. Respondents were asked to consider their responses in terms of how they think and feel about causal beliefs and attribution of success and failure in academics. The Achievement sub-section consists of 24 statements dealing with achievement locus of control, which are categorized into four subgroups; ability, effort, context and luck. Further, six statements in each subgroup can be classified into either internal or external locus of control items. Respondents were required to indicate their degree of agreement with each statement using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). When coding responses, this scale was subsequently reduced to a scale of 0 (Strongly disagree) to 4 (Strongly agree) as per coding instructions of the original instrument. Scores for each subgroup could range between 0 and 24 with high scores indicating a preference for that attribution. From the scale, the researcher computed indices for external and internal attributions, unstable and stable attributions and attributions for success and failure. Measures of internal consistency have been found to range between 0.58 and 0.80 for the achievement sub-scale. The Cronbach alphas for
the various indices of attribution and the overall Cronbach alpha were
presented in Table 3.3.

**Table 3.3**

*Cronbach Alphas for Attributions*

<table>
<thead>
<tr>
<th>Attribution index</th>
<th>Cronbach alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability</td>
<td>0.62</td>
</tr>
<tr>
<td>Effort</td>
<td>0.59</td>
</tr>
<tr>
<td>Context</td>
<td>0.62</td>
</tr>
<tr>
<td>Luck</td>
<td>0.65</td>
</tr>
<tr>
<td>Internal</td>
<td>0.68</td>
</tr>
<tr>
<td>External</td>
<td>0.77</td>
</tr>
<tr>
<td>Overall achievement sub-scale</td>
<td>0.75</td>
</tr>
</tbody>
</table>

These reliability coefficients were considered to be within the bounds of
findings of the original instrument and were therefore appropriate for this
study.

c. **Intellectual Engagement Inventory**

Academic disidentification was measured using the Intellectual Engagement
Inventory (Major & Schmader, 1998). Permission to use the instrument was
received from Dr. Brenda Major of the Department of Psychological and Brain
Sciences, University of California, Santa Barbara (UCSB), USA.

Disidentification (referred to as disengagement in the instrument) comprises
two mechanisms, discounting and devaluing. Students rated eight items on a 5-
point scale (1 = strongly disagree, 5 = strongly agree). Discounting was
assessed using four items. In adapting the instrument for pretesting, some
words on the discounting sub-scale were changed. 'Standardised achievement
tests' was replaced by 'school examinations'. The mean scores for each
disidentification facet were computed, with higher means indicating greater 
disidentification on that facet. Negatively worded items were reverse coded so 
that higher means indicated greater discounting and devaluing. To establish 
how the instrument measured up in the pretest, a comparison was done with 
reliability indices from the original study and some related studies. The results 
were presented in Table 3.4.

Table 3.4

Cronbach Alphas for Intellectual Engagement Inventory

<table>
<thead>
<tr>
<th>Study</th>
<th>Discounting</th>
<th>Devaluing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major and Schmader (1998)</td>
<td>0.81</td>
<td>0.66</td>
</tr>
<tr>
<td>Regner and Loose (2006)</td>
<td>0.73</td>
<td>0.71</td>
</tr>
<tr>
<td>Stephan et al. (2010)</td>
<td>0.68</td>
<td>0.71</td>
</tr>
<tr>
<td>Loose et al. (2012)</td>
<td>0.71</td>
<td>0.80</td>
</tr>
<tr>
<td>Pilot study (2014)</td>
<td>0.63</td>
<td>0.68</td>
</tr>
</tbody>
</table>

The differences in reliability coefficients presented in Table 3.4 were 
hypothesised to be as a result of cultural differences between the samples used. 
It was also concluded that the coefficients were fairly consistent across 
cultures. It was therefore accepted that $\alpha = 0.63$ for discounting and $\alpha = 0.68$ 
for devaluing were good enough for this sample.

3.5.3 Interview Schedule

Semi-structured interviews were conducted with eleven class teachers on a 
range of issues that capture characteristics of disidentified learners and 
predictors of disidentification. The researcher sought to know the teachers' 
personal experiences with learners who have lost interest in school and other 
issues such as feedback, students' attributions and motivation. The interviews
were done in school after class hours. The researcher recorded the interviews after seeking the consent of the respondents. Key issues that emerged were arranged thematically for enriching the succeeding interviews and for analysis. Semi-structured interviews were preferred because of their known "compatibility with several methods of data analysis" (Willig, 2008, p. 23). They were also found to be flexible and adaptable to the needs of participants than other forms of qualitative data collection (Matthews & Ross, 2010). Additionally, semi-structured interviews provided opportunity for respondents to expound on their responses and hence, generate rich contextual data related to discounting and devaluing.

3.6 Data Collection

3.6.1 Logistical and Ethical Considerations

Permission to carry out research was sought from Graduate School, Kenyatta University, National Council of Science, Technology and Innovation (NACOSTI) and the County Education Office, Mombasa County. The researcher then approached school administrators and class teachers from the selected schools to establish rapport, explain the purpose of the study and arrange for administering the instruments. Student respondents were required to sign consent forms after being briefed about the study. They were verbally guaranteed that their participation was voluntary and that they were free to withdraw from the study unconditionally. For anonymity and confidentiality of responses, respondents were not to write their names on the questionnaires. However, they were to indicate their admission numbers which were used to
track examination performance across three school terms. For the qualitative study, teachers were assured that the contents of the interview would be kept in strict confidence as recommended by Berg (2001). Their consent was sought to record the interviews and they were assured that the contents of recorded data would be kept in a secure place.

3.6.2 Actual Data Collection

With permission from school administrators, the students’ questionnaire was administered during normal school hours. The selected students were briefed about the study and requested to sign consent forms. Then the researcher explained how to score the rating scales and invited students to fill in the questionnaires in his presence. The researcher also requested teachers in charge of academics in respective schools to provide students' achievement records for three successive terms (third term of form two, 2013, and first and second term of 2014). These were used by the researcher to obtain respondents’ academic achievement records. All questionnaires for students took between 20-30 minutes to complete though flexibility in time was allowed for respondents who were slow. The completed questionnaires were then collected by the researcher for eventual analysis. Interviews for teacher respondents were arranged at their convenience after sending the interview schedule in advance and contacting them on phone for confirmation of date and time. They were informed about the nature, length and format of the interview in advance (Matthews & Ross, 2010). The 30-45 minute interviews occurred on school premises and they were tape-recorded with permission from the respondents.
and later transcribed. The transcripts served as primary sources of data for thematic analysis.

3.7 Data Analysis

a. Quantitative data

Data was analysed using descriptive and inferential statistics by use of Statistical Package for Social Sciences (SPSS). After completion of data entry, data cleaning was done to check incorrect entries and possible outliers. Descriptive statistics including frequencies and percentages were used in describing the characteristics of the sample and in data summary. Inferential statistics were used to test hypotheses. Data was presented in the form of tables and graphs. The study tested the following hypotheses at $\alpha = 0.05$.

$H_{01}$: There are no significant differences in academic disidentification between male and female students in national, sub-county and private secondary schools. Statistical test: Two-way ANOVA

$H_{02}$: There are no significant differences in academic self-esteem between male and female students in national, sub-county and private secondary schools. Statistical test: Two-way ANOVA

$H_{03}$: Academic achievement does not significantly predict academic disidentification of secondary school students. Statistical test: Simple linear regression

$H_{04}$: Causal attributions do not significantly predict academic disidentification of secondary school students. Simple linear regression
H₀₅: Academic self-esteem does not significantly mediate the relationship between gender, type of school, academic achievement and causal attributions and academic disidentification of secondary school students.

Multiple linear regression

To estimate the extent to which academic self-esteem mediates the relationship between gender, school type, grades and causal attributions and academic disidentification, the study used the mediation model. Mediation analysis involves establishing four conditions (Baron & Kenny, 1986; Frazier, Tix & Barron, 2004; MacKinnon, 2008). First, the predictor is regressed on the outcome to establish direct effects that can be mediated (Path c). Secondly, a significant relationship is established between the predictor and mediator (Path a). Third, when controlling for the effect of the mediator on the outcome variable, the effect of the predictor on outcome is insignificant. This step establishes the significant relationship between mediator and outcome variable and the presence of indirect effects (Path c’). The four steps are represented using three formulae:

1. \( Y = i₁ + cX + e₁ \)
2. \( Y = i₂ + c'X + bM + e₂ \)
3. \( M = i₃ + aX + e₃ \)

Where \( Y \) is the dependent variable, \( X \) is the independent variable, \( M \) is the mediating variable, \( c \) is the coefficient relating the independent variable and the dependent variable, \( c' \) is the coefficient relating the independent variable to the dependent variable adjusted for the mediator variable, \( b \) is the coefficient relating the mediator to the dependent variable adjusted for the independent
variable, \( a \) is the coefficient relating the independent variable to the mediating variable, \( e_1, e_2, \) and \( e_3 \) represent error variance, and the intercepts are \( i_1, i_2, i_3 \) (MacKinnon, 2008). A reduction in the value of the predictor variable in Path \( b \) as compared to the value in Path \( c \) while the model retains statistical significance leads to the conclusion of partial mediation while complete mediation is assumed if Path \( b \) is statistically insignificant. The model is presented in Figure 3.1.

MacKinnon (2008) suggests two ways of quantifying mediated effects; as the product of the \( a \) and \( b \) parameters, \( ab \), and as the difference between the \( c \) and
c’ parameters, $c - c’$. The value of the mediated or indirect effect estimated by taking the difference in the coefficients, $c - c’$, from equations 1 and 2 corresponds to the reduction in the effect of the independent variable on the dependent variable when adjusted for the mediator. He argues that,

The rationale behind the $ab$ mediation quantity is that mediation depends on the extent to which the independent variable affects the mediator (parameter $a$) and the extent to which the mediator affects the dependent variable (parameter $b$). The $ab$ quantity reflects how much a 1 unit change in X affects Y indirectly through M. Similarly, the $c$ parameter when adjusted for the mediator, $c’$ reflects how much of the relation between the independent variable and the dependent variable is explained by the mediator (p. 51).

To determine the limits of mediation, the standard error of the mediated effect was calculated using the delta method (Sobel, 1982);

$$\sqrt{b^2s_a^2 + a^2s_b^2}$$

Where, $s_a = \text{standard error of } a$; $s_b = \text{standard error of } b$

To test for significance of the mediated effect, the $ab$ or $c-c’$ value was then divided by its standard error and the ratio compared to the $z$ value of 95% confidence limits of a standard normal distribution (MacKinnon, Fairchild & Fritz, 2007). The relative magnitude of mediated effects was calculated as a proportion of the total effect (Alwin & Hauser, 1975, cited in Preacher & Kelley, 2011) and Sobel (1982). The formula was given as:

$$P_M = 1 - c’/c$$
b. Qualitative Data

Once the researcher had collected data from all teachers selected for the study, thematic analysis was used in analysis. Grbich (2007, p. 16) as cited in Matthews and Ross (2010) defines thematic analysis as "a process of segmentation, categorisation and relinking of aspects of the data prior to final interpretation" (p. 373). The following steps were undertaken:

a. The recorded interviews were transcribed verbatim or "near verbatim" (Willig, 2008, p. 26) and each transcript read and short notes made to have a summary statement of the main points of each respondent. Duplications within the main points of respondents were deleted to reduce the number of similar categories and remain with relevant text. The reduced categories were then grouped together and labelled as themes. According to Auerbach and Silverstein (2003) a theme is "an implicit topic that organises a group of repeating ideas" (p. 38). Factors from each transcript that fit in specific categories were grouped together.

b. Specific themes were analysed during this study and auxiliary themes developed in the process. These content-based themes were developed in line with literature reviewed, theory and study objectives.

c. Teachers' subjective experiences regarding students' discounting and devaluing were woven into a theoretical narrative, using their own words as much as possible. In the process, a bridge emerged linking research objectives and raw data.
d. For confidentiality, each respondent's real name was changed to a case number when reporting findings following the recommendations of Berg (2001).
CHAPTER FOUR
PRESENTATION OF FINDINGS, INTERPRETATION AND DISCUSSION

4.1 Introduction

This chapter presents the findings of the study, interpretation and discussion of results in the order of objectives. The chapter is divided into three sections: Introduction, general and demographic information and results, interpretation and discussion of results. The chapter follows the order of objectives analysed using both quantitative and qualitative methods. This study was guided by the need to:

i. Find out differences in academic disidentification between male and female students in national, sub-county and private secondary schools in Mombasa County.

ii. Identify differences in academic self-esteem between male and female students in national, sub-county and private secondary schools in Mombasa County.

iii. Find out the extent to which academic achievement predicts academic disidentification among secondary school students in Mombasa County.

iv. Determine the extent to which causal attributions predict academic disidentification among secondary school students in Mombasa County.
Establish the extent to which academic self-esteem mediates the relationship between gender, type of school, academic achievement and causal attributions and academic disidentification 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 used for the study. It also shows the extent of contact with teacher respondents for interviews. The final sample size is then discussed.

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 99% was reported because the researcher collected the questionnaires immediately after administration. A sample of 453 students was expected but 449 were actually used in the analysis because four students did not have a consistent record of three term examinations.

The purpose of the qualitative study was to augment the body of literature in the area of academic disidentification by focusing on the portrait of the disidentified student and the contributors to disidentification. Secondly, it sought to present a personal touch to the quantitative findings. Data were collected using semi-structured interviews of 11 class teachers in secondary schools in Mvita Sub-county. A total sample of 460 respondents was therefore
used for this study. The actual students' sample for the study is presented in Table 4.1.

**Table 4.1**

*Return Rate*

<table>
<thead>
<tr>
<th>Type of School</th>
<th>Gender</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td></td>
<td>f</td>
<td>%</td>
</tr>
<tr>
<td>National</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Sub-county</td>
<td>154</td>
<td>34.3</td>
</tr>
<tr>
<td>Private</td>
<td>52</td>
<td>11.6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>206</strong></td>
<td><strong>45.9</strong></td>
</tr>
</tbody>
</table>

**4.2.2 Demographic Data**

Results from Table 4.1 indicate that schools were sub-divided into national, sub-county and private strata. The only national school in the Sub-county is a girls' school and had 38 respondents. Eight sub-county schools contributed the majority of students. Overall, the sample consisted of 206 (45.9%) male and 243 (54.1%) female students from 12 secondary schools in Mvita Sub-county of Mombasa County, Kenya.

Eleven teachers comprising seven females and four males were used to collect qualitative data. Their teaching experience ranged from three to 27 years. For anonymity, the 11 participants were identified by letter, from A to K. The alphabetical coding of interview participants was listed beside their respective types of schools and presented in Table 4.2.
### Table 4.2

**Interview participants**

<table>
<thead>
<tr>
<th>Participant Code</th>
<th>Type of School</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>SCGS</td>
</tr>
<tr>
<td>B</td>
<td>SCBS</td>
</tr>
<tr>
<td>C</td>
<td>NS</td>
</tr>
<tr>
<td>D</td>
<td>PS</td>
</tr>
<tr>
<td>E</td>
<td>SCBS</td>
</tr>
<tr>
<td>F</td>
<td>SCGS</td>
</tr>
<tr>
<td>G</td>
<td>SCBS</td>
</tr>
<tr>
<td>H</td>
<td>PS</td>
</tr>
<tr>
<td>I</td>
<td>PS</td>
</tr>
<tr>
<td>J</td>
<td>SCGS</td>
</tr>
<tr>
<td>K</td>
<td>SCGS</td>
</tr>
</tbody>
</table>

*Note: SCGS = Sub-county Girls School, SCBS = Sub-county Boys School, NS = National School, PS = Private school*

### 4.3 Results of the Study

Findings of the study were presented in line with study objectives. For the quantitative data, descriptive statistics related to each objective were given, followed by inferential statistics to test study hypotheses. Qualitative findings were re-arranged and presented in the order of the main objectives of the study. A discussion of findings from quantitative and qualitative analyses was then done.

#### 4.3.1 Differences in Academic Disidentification between Male and Female Students in National, Sub-county and Private Secondary Schools

To find out whether academic disidentification varied among male and female students in national, sub-county and private schools, descriptive analysis of respondents' discounting and devaluing was done, followed by hypothesis testing, qualitative analysis and discussion of findings.
a. Description of Students' Gender, Type of School and Academic Disidentification

The study sought to examine students' discounting and devaluing on the basis of gender and type of school. The findings were tabulated and presented in Table 4.3.

Table 4.3

Descriptive Statistics of Disidentification by Gender and School Type

<table>
<thead>
<tr>
<th></th>
<th>Discounting</th>
<th></th>
<th>Devaluing</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low</td>
<td>High</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td></td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>164</td>
<td>36.5</td>
<td>42</td>
<td>9.4</td>
</tr>
<tr>
<td>Female</td>
<td>177</td>
<td>39.4</td>
<td>66</td>
<td>14.7</td>
</tr>
<tr>
<td>Total</td>
<td><strong>341</strong></td>
<td><strong>75.9</strong></td>
<td><strong>108</strong></td>
<td><strong>24.1</strong></td>
</tr>
<tr>
<td>ToS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>National</td>
<td>29</td>
<td>6.4</td>
<td>9</td>
<td>2.0</td>
</tr>
<tr>
<td>Sub-county</td>
<td>250</td>
<td>55.6</td>
<td>61</td>
<td>13.5</td>
</tr>
<tr>
<td>Private</td>
<td>62</td>
<td>13.8</td>
<td>38</td>
<td>8.4</td>
</tr>
<tr>
<td>Total</td>
<td><strong>341</strong></td>
<td><strong>75.9</strong></td>
<td><strong>108</strong></td>
<td><strong>24.1</strong></td>
</tr>
</tbody>
</table>

Note: ToS = Type of School

Table 4.3 indicates that more female 66 (14.7%) than male 42 (9.4%) students discounted. However, more male 20 (4.5%) than female 8 (3.3%) students devalued outcomes in the academic domain.

To compare gender and type of school differences in discounting and devaluing, means of discounting and devaluing were computed. The results were presented in Table 4.4. Table 4.4 shows that while more male students reported higher devaluing, more females reported higher discounting. Additionally, students from private schools reported higher discounting and devaluing.
Table 4.4

*Overall Means and Standard Deviations of Disidentification by Gender and School Type*

<table>
<thead>
<tr>
<th>Academic disidentification</th>
<th>Discounting</th>
<th>Devaluing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>8.85</td>
<td>.23</td>
</tr>
<tr>
<td>Female</td>
<td>9.37</td>
<td>.22</td>
</tr>
<tr>
<td>Type of school</td>
<td></td>
<td></td>
</tr>
<tr>
<td>National</td>
<td>8.76</td>
<td>.47</td>
</tr>
<tr>
<td>Sub-county</td>
<td>8.41</td>
<td>.17</td>
</tr>
<tr>
<td>Private</td>
<td>10.11</td>
<td>.29</td>
</tr>
</tbody>
</table>

To compare levels of discounting and devaluing between students in specific schools, means and standard deviations were computed and presented in Table 4.5.

Table 4.5

*Means and Standard Deviations of Discounting and Devaluing by Group*

<table>
<thead>
<tr>
<th>Academic disidentification</th>
<th>Discounting</th>
<th>Devaluing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>ToS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>National</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>S/county</td>
<td>8.56</td>
<td>.23</td>
</tr>
<tr>
<td>Private</td>
<td>9.14</td>
<td>.40</td>
</tr>
</tbody>
</table>

Table 4.5 indicates that female students in private schools reported the highest discounting while their male counterparts reported the highest devaluing.
b. Hypothesis Testing

In line with the first objective of the study which sought to establish differences in academic disidentification between students in national, sub-county and private secondary schools, the first null hypothesis was stated thus: 

\( \text{H}_01: \) There are no significant differences in academic disidentification between male and female students in national, sub-county and private secondary schools.

To test this hypothesis, two supplementary null hypotheses were formulated.

\( \text{H}_01.1: \) There are no significant differences in discounting between male and female students in national, sub-county and private secondary schools.

\( \text{H}_01.2: \) There are no significant differences in devaluing between male and female students in national, sub-county and private secondary schools.

i. First Supplementary Null Hypothesis

\( \text{H}_01.1: \) There are no significant differences in discounting between male and female students in national, sub-county and private secondary schools.

A 2 (Gender: Male, Female) × 3 (Type of school: National, Sub-county, Private) ANOVA was conducted that examined the effect of gender and type of school on discounting. The analysis yielded a statistically significant main effect for type of school, \( F(1, 444) = 13.28, p < .001, \eta^2 = 0.05. \) Post hoc pairwise comparisons of means using the Tukey HSD (Honestly Significant Difference) revealed that private schools' means on discounting were significantly higher (\( M = 10.11, SE = 0.29 \)) as compared to national (\( M = 8.76, SE = 0.47 \)) and sub-county schools (\( M = 8.41, SE = 0.17 \)). There were no
significant differences in discounting between students in national and sub-county schools.

There was also a significant main effect of gender, $F(1, 444) = 6.16, p = .013, \eta^2 = 0.01$. Female students reported higher discounting ($M = 9.37, SE = 0.22$) than male students ($M = 8.85, SE = 0.23$). Evidence found led to the rejection of the first supplementary null hypothesis. The results of the ANOVA were presented in Table 4.6.

Table 4.6

<table>
<thead>
<tr>
<th>ANOVA for Discounting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sum of Squares</td>
</tr>
<tr>
<td>Intercept</td>
</tr>
<tr>
<td>Gender</td>
</tr>
<tr>
<td>SchType</td>
</tr>
<tr>
<td>Gender * SchType</td>
</tr>
</tbody>
</table>

$^a$R Squared = .076 (Adjusted R Squared = .068)

There was a statistically significant interaction, $F(1, 444) = 11.25, p = .001, \eta^2 = 0.02$. This indicates that male and female students discounted differently across levels of schools. While discounting was almost similar for male ($M = 8.56, SE = 0.23$) and female students ($M = 8.27, SE = 0.23$) in sub-county schools, it was significantly higher for female students ($M = 11.08, SE = 0.42$) compared to males ($M = 9.14, SE = 0.40$) in private schools, and females in the national school ($M = 8.76, SE = 0.47$). The findings were presented in Figure 4.1.
When testing for simple main effects of type of school for each level of gender, the ANOVA equation for females was significant, $F(1, 444) = 17.37, p < .001$, $\eta_p^2 = 0.07$. Post hoc pairwise comparisons of means using Tukey HSD procedure showed that female students’ means on discounting were significantly different between national ($M = 8.76, SD = 0.47$) and private ($M = 11.08, SD = 0.42$) schools. No significant differences in discounting were found between female students in national and sub-county schools. The results were reported in Table 4.7.
Table 4.7

Post hoc Comparisons of Simple Main Effects of School Type

<table>
<thead>
<tr>
<th>(I) Type of School</th>
<th>(J) Type of School</th>
<th>Mean Difference (I-J)</th>
<th>Std. Error</th>
<th>Sig.</th>
<th>95% CI Lower Bound</th>
<th>95% CI Upper Bound</th>
</tr>
</thead>
<tbody>
<tr>
<td>National</td>
<td>Sub-county</td>
<td>.35</td>
<td>.49</td>
<td>.761</td>
<td>-.82</td>
<td>1.52</td>
</tr>
<tr>
<td></td>
<td>Private</td>
<td>-1.31*</td>
<td>.55</td>
<td>.049</td>
<td>-2.61</td>
<td>.01</td>
</tr>
<tr>
<td>Sub-county</td>
<td>National</td>
<td>-.35</td>
<td>.49</td>
<td>.761</td>
<td>-1.52</td>
<td>.82</td>
</tr>
<tr>
<td></td>
<td>Private</td>
<td>-.17*</td>
<td>.33</td>
<td>.000</td>
<td>-2.44</td>
<td>-.87</td>
</tr>
<tr>
<td>Private</td>
<td>National</td>
<td>1.31*</td>
<td>.55</td>
<td>.049</td>
<td>.01</td>
<td>2.61</td>
</tr>
<tr>
<td></td>
<td>Sub-county</td>
<td>1.66*</td>
<td>.33</td>
<td>.000</td>
<td>.87</td>
<td>2.44</td>
</tr>
</tbody>
</table>

Note: The mean difference is significant at the 0.05 level

Simple main effects of gender for each type of school revealed a significant effect for private schools, $F(1, 444) = 11.26, p = .001, \eta^2 = 0.02$. Discounting of both male ($M = 9.14, SD = .40$) and female ($M = 11.08, SD = .42$) students in private schools were significantly different when compared to students in national and sub-county schools. There were no significant differences in discounting between students in national and sub-county schools.

ii. Second Supplementary Hypothesis

$H_{01.2}$: There are no significant differences in devaluing between male and female students in national, sub-county and private secondary schools.

A 2 (Gender: Male, Female) × 3 (Type of school: National, Sub-county, Private) ANOVA was conducted. The analysis yielded a significant main effect for gender, $F(1, 444) = 5.59, p = .018, \eta^2 = .01$. Male students were therefore found to have significantly higher means ($M = 5.69, SE = 0.17$) on devaluing than female students ($M = 5.08, SE = 0.16$). However, type of school had no significant effect, $F(2, 444) = 0.05, p = .945$. Evidence failed to reject the
hypothesis that the means on devaluing between male and female students were not equal in national, sub-county and private schools. The ANOVA results were presented in Table 4.8.

Table 4.8

ANOVA for Devaluing

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
<th>Partial Eta Squared</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>7858.82</td>
<td>1</td>
<td>7858.82</td>
<td>1749.10</td>
<td>.000</td>
<td>.79</td>
</tr>
<tr>
<td>Gender</td>
<td>25.12</td>
<td>1</td>
<td>25.12</td>
<td>5.59</td>
<td>.018</td>
<td>.01</td>
</tr>
<tr>
<td>SchType</td>
<td>.51</td>
<td>2</td>
<td>.25</td>
<td>.057</td>
<td>.945</td>
<td>.00</td>
</tr>
<tr>
<td>Gender * SchType</td>
<td>.06</td>
<td>1</td>
<td>.06</td>
<td>.014</td>
<td>.905</td>
<td>.00</td>
</tr>
<tr>
<td>Total</td>
<td>14915.00</td>
<td>449</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. R Squared = .019 (Adjusted R Squared = .010)

c. Qualitative analysis

Theoretically, disidentified students are more likely to invest less effort in academic work because they do not define themselves on the basis of academic success. In this study, participants A to K shared their interactions with disidentified learners. When asked if showing interest in school decreased with the transition of students from primary to secondary school, Teacher A said that most of the time motivation among female students goes down as students move up the school ladder because in primary school students are "pushed" by parents but when they get to secondary school, their parents see them as "adults and responsible enough not to be pushed". Teacher A also said that secondary school teachers do not "push students" as much as primary school teachers do. However, Teacher G presented a contrasting viewpoint by
reporting that among boys, motivation towards academic work oscillated between extremes but at form three, it "took a sharp turn upwards when they realise the importance of education".

When asked why students are likely to lose interest in academic work, Teacher A suggested that many students just want to get the certificates because girls are guaranteed of marriage immediately after school and boys are assured of work in their family businesses. This was found to be a reason not to invest any effort in study. This view found support from Teacher I and Teacher J who introduced the aspect of cultural socialisation. It emerged that girls of Arab extraction are married off after form four and just want to go through the system. Similarly, boys of Indian and Arab descent are guaranteed jobs in family businesses if they come from business-oriented families. Additionally, girls are not often allowed to pursue higher academic qualifications irrespective of the grades they get at form four. As Teacher I put it, "to them, they would really want to be something, but their culture will not allow them and they will tell you outright that unless I become an outcast, my parents cannot allow me to do some things". The girls may also tell the teacher to "stop bothering me because even if I get that (good grades) I am going to get married before KCSE". This makes the girls invest less effort in academics.

Disidentified learners do not participate in class and find school to be a nuisance. Teacher A estimated up to 10 students in a class of 40 who neither ask nor answer questions. The participant who is a Kiswahili teacher noted that girls who have no interest in class work do not volunteer to read Kiswahili set
books in turns in class. They have to be cajoled to read and most of the time they do not bother to bring the specific books to school. Such learners were also found to have high rates of absenteeism. As Teacher A aptly put it; "it is very rare to find such a student in school for five days a week". Such students attend school erratically because of supposed "illness", a finding that was also reported by Teacher G who noted reasons given for absence such as parents' marital problems, or participating in family functions. Teacher G narrated one of many occurrences when a student resurfaces in school after a few days away with a hilarious tale;

A student will tell you – you know my father and my mother fought last week and my mother packed her bags and left. In her luggage was my uniform so the days I was away I was trying to find her. I got her yesterday and that is how I got my uniform. Now you see me.

On the whole, participants were convinced that students' reasons for absence are not always genuine. Teacher C concurred, saying that motivation for class participation is "on the lower side because the teacher has to push these girls to produce". These sentiments were echoed by Teacher J who said that just 10% of students in form three had motivation of any sort towards academics. Students' failure to participate in class and do assignments was also cited by Teacher I who said that students are not self-driven and "you have to put your foot down...in fact there's a class I had to give up because I could push no more". She found boys to need more "pushing" than girls. "Pushing" boys was also reported by Teacher E, who found the behaviour more endemic in mathematics and sciences. Though Teacher K concurred with the rest, it was
interesting to find out that "more than half" of the girls in her form three class are apathetic to academic work and "very few – around 20%" are concerned about academic achievement, an opinion shared by Teacher H. Teacher G estimated up to 11 students in a class of 40 who completely lack commitment to school and seem to have been forced by parents to be in school. Such students do not do assignments and the teacher's insistence on assignments is directly related to absenteeism. Teacher G, C and D thought that such students come from rich families who do not value education as a bridge to future formal employment. One interesting finding from Teacher G was that uncommitted learners were also disruptive in class with intent to make others laugh. As he narrated,

A student may ask; teacher, at the end of the day, if I went to the shop to buy sugar, would the shopkeeper ask for the logarithm of 30 so as to sell me sugar?

An interesting perspective from Teacher F, E and C was that though students found school to be a nuisance, they had nowhere else to go because parents ensured they remained in school. As Teacher E narrated, "absenteeism is not as high since their parents do not want to leave them at home so they have no other place to go but school". It also emerged that some students who were under parents' pressure to be in school had the habit of leaving home in the morning but never arriving in school.

It was expected that students who find the present academic pursuit worthwhile for their future were not likely to disidentify with school. When asked whether
students considered academic achievement to be important, it emerged that more boys than girls valued education. Though the proportions were asymmetrical, it also emerged that students of African extraction valued education more than those of Arab and Indian extraction. Teacher I cited the case of a girl who wanted to drop out at class eight but was forced to proceed to form one. The specific girl in form three was described as more interested in practicing 'heena' art more than academics and as she put it, the student does not see the value of education. The girl was quoted by the teacher thus;

One bridal heena costs five thousand and I can do ten in a day, so why would I struggle to read? I do not even need a certificate...I am going to open a salon and do bridal heena.

Teacher I also related a case where up to 11 girls from her school who sat KCSE in 2013 and qualified for university somehow ended up in town doing certificate courses in stitching and computer studies while one who got a straight A and got an admission for Medicine at university opted to go for religious studies. The views of all participants in sub-county and private schools show that when compared, most girls, especially of Arab and Asian extraction, and of one faith do not see any connection between the present academic achievement and future outcomes because most often get married after form four, irrespective of the grades they eventually earn in KCSE.

Contrastingly, Teacher C said that girls see a link between the present academic achievement and future outcomes because they have careers that they are working towards though some are working towards careers dictated
by parents. A number also remain committed to academics simply because they want to get "a minimum grade to escape repeating a class".

Boys who do not link educational achievement and future success are more likely to have been promised to go abroad, especially in the Gulf region or are from business-oriented families and look forward to joining family businesses. This is especially so among male students of Arab descent. Teacher G reported that in confirmation of the fact that boys show higher linkage of current academics to the future, students in his class demanded higher frequency of random assessment tests (RATs) in mathematics per week. He attributed this upsurge in interest to a talk he had with his class concerning the importance of effort investment in the present for future outcomes. A different opinion was shared by Teacher E who noted that boys might not connect the present to the future if they encounter friends and family who make it in life without formal schooling.

This perspective came through during this study in two unanticipated themes. First, Teacher C, F, H, I, J and K agreed that the "comforts" that girls who deal with male tourists enjoy is definitely related to female students finding little value in education. These "comforts" include cars, money and a flashy lifestyle of clubbing in Mombasa and Mtwapa. Some female students therefore find no reason why they should be committed to academics when there are "easier" ways of earning a living. Secondly, male students are constantly exposed to stories of fame and fortune of those who travel to Gulf countries of Saudi
Arabia, Bahrain, Qatar and UAE among others. It emerged that students, especially boys, want to get form four certificates to help them secure "dream" jobs in Gulf countries. When the researcher sought to find out why, it emerged from Teacher E, A and B that irrespective of the kind of job they go to do – whether as domestic workers, drivers or security guards, male students want to have a legacy of "I have been to the Gulf". Additionally, such students hear stories of high pay associated with odd jobs and henceforth devalue education because they are sure to earn more money than their peers who succeed in academics.

d. Discussion of Findings

The results of participants' type of school on devaluing partially parallel the findings of Strambler and Weinstein (2010) who found that in schools where students had negative perceptions of teacher feedback, levels of devaluing were higher.

Qualitative and quantitative analyses show gender differences in disidentification with female students discounting more while male students devalued more. The finding concerning higher numbers of male students devaluing academic achievement parallels the findings of Cokley and Moore (2007) and Osborne (1997) who found out that African American men devalued academic success more than women but contradict Strambler and Weinstein (2010) who found no gender effects. The finding concerning more female than male students from private schools discounting seems to
corroborate Lesko and Corpus (2006) who found a significant main effect of gender on performance and discounting when women were evaluated among men. In their study, women showed significantly lower performance and higher discounting than males. The finding also parallels Inzlicht and Ben-Zeev (2006) who found out that female students experienced performance deficits when evaluated among men and the deficits were on stereotyped tasks. It seems that female students in private schools were operating in a "threatening intellectual environment" (p. 367) that awakened the negative gender stereotypes concerning women's lack of intellectual ability when among males. Similarly, the finding supports Beaton et al. (2014) and Tougas et al. (2005).

The finding concerning the higher numbers of male students who devalued academic achievement has been explained in the literature. Ogbu (2003) refers to it in terms of gender socialization specifically with the "cool pose" culture (p. 24). It was also thought that African American male students lacked role models in the classroom or the lack of exposure to African American male students who are high academic achievers. Explanations for discounting among females in this study were shown in qualitative findings to be related to culture that denies girls opportunities for academic mobility and the tourism culture. They end up finding education to be of lesser worth when compared to other activities. This finding seems to partially explain the findings of Jones (2006) that 50% of girls who were into sex tourism were still in school.
The qualitative finding concerning students’ decreasing school commitment as they climb up the school ladder corroborates the theoretical postulation by Steele (1992) and empirical findings (Osborne, 1995, 1997) that Black students do not begin schooling disidentified. Steele argued that all students begin schooling strongly identified with academics, and that there must be something in the educational environment to cause students to become disidentified, a finding supported by Kwena (2007). Qualitative findings therefore support Steele’s assertion that disidentification is a developmental process that occurs over years of schooling.

4.3.2 Gender Differences in Academic Self-esteem between Students in National, Sub-county and Private Secondary Schools

The study sought to find out differences in academic self-esteem between male and female students in national, sub-county and private schools. Descriptive analysis of respondents' academic self-esteem and academic disidentification was done, followed by hypothesis testing and qualitative analysis. Findings were discussed in the last section.

a. Description of Students' Academic Self-esteem and Academic Disidentification

Respondents were asked to indicate their level of academic self-esteem on a scale of 1 – Strongly disagree to 5 – Strongly agree. Some items were reverse scored. The scores on the 7-item scale ranged from 7 – 35 with higher scores indicating higher academic self-esteem. The mean score was 21.79 with a
standard deviation of 5.05. The distribution of academic self-esteem scores was negatively skewed (Skewness = -0.09) but closer to zero meaning that marginally higher numbers of respondents rated their academic self-esteem favourably. The median split of respondents’ academic self-esteem scores was used to divide the group into high and low academic self-esteem. The scores were tabulated and presented in relation to gender and type of school in Table 4.9.

**Table 4.9**

*Descriptive Statistics of Academic Self-esteem*

<table>
<thead>
<tr>
<th>Factor</th>
<th>Mean</th>
<th>SD</th>
<th>Low</th>
<th>High</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>22.07</td>
<td>0.41</td>
<td>98</td>
<td>108</td>
<td>206</td>
</tr>
<tr>
<td>Female</td>
<td>21.58</td>
<td>0.39</td>
<td>123</td>
<td>120</td>
<td>243</td>
</tr>
<tr>
<td>National</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>22.32</td>
<td>0.82</td>
<td>19</td>
<td>19</td>
<td>38</td>
</tr>
<tr>
<td>Female</td>
<td>21.82</td>
<td>0.29</td>
<td>151</td>
<td>160</td>
<td>311</td>
</tr>
<tr>
<td>ToS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>National</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>22.07</td>
<td>0.41</td>
<td>98</td>
<td>108</td>
<td>206</td>
</tr>
<tr>
<td>Female</td>
<td>21.58</td>
<td>0.39</td>
<td>123</td>
<td>120</td>
<td>243</td>
</tr>
<tr>
<td>Sub-county</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>22.32</td>
<td>0.82</td>
<td>19</td>
<td>19</td>
<td>38</td>
</tr>
<tr>
<td>Female</td>
<td>21.82</td>
<td>0.29</td>
<td>151</td>
<td>160</td>
<td>311</td>
</tr>
<tr>
<td>Private</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>21.47</td>
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<td>100</td>
</tr>
<tr>
<td>Female</td>
<td>21.22</td>
<td>0.49</td>
<td>102</td>
<td>98</td>
<td>200</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>221</td>
<td>228</td>
<td>449</td>
</tr>
</tbody>
</table>

*Note: ToS = Type of School*

Findings in Table 4.9 indicate that almost equal numbers of students reported low and high academic self-esteem respectively. Findings also show that marginally higher numbers of female students reported low academic self-esteem.

To compare levels of academic self-esteem between students in schools, means and standard deviations were computed and presented in Table 4.10.
Table 4.10

Means and Standard Deviations of Academic Self-esteem

<table>
<thead>
<tr>
<th>Factor</th>
<th>National</th>
<th>Sub-county</th>
<th>Private</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$M$</td>
<td>$SD$</td>
<td>$M$</td>
</tr>
<tr>
<td>Male</td>
<td>-</td>
<td>-</td>
<td>21.59</td>
</tr>
<tr>
<td>Female</td>
<td>22.32</td>
<td>0.82</td>
<td>22.06</td>
</tr>
</tbody>
</table>

Table 4.10 shows that male students in sub-county schools reported lower academic self-esteem while female students in private schools reported the lowest academic self-esteem compared to their national and sub-county counterparts.

The study then sought to find out whether academic self-esteem was related to changes in levels of discounting and devaluing. The results were presented in Table 4.11.

Table 4.11

Descriptive Statistics of Academic Disidentification by Academic Self-esteem

<table>
<thead>
<tr>
<th>ASE</th>
<th>Discounting</th>
<th>Devaluing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td></td>
<td>$f$</td>
<td>%</td>
</tr>
<tr>
<td>Low</td>
<td>157</td>
<td>35.0</td>
</tr>
<tr>
<td>High</td>
<td>184</td>
<td>41.0</td>
</tr>
<tr>
<td>Total</td>
<td>341</td>
<td>75.9</td>
</tr>
</tbody>
</table>

As hypothesised, findings from Table 4.11 indicate that of the students who reported high academic self-esteem, almost half also reported low levels of both discounting 184 (41.0%) and devaluing 220 (49.0%) respectively. However, it is instructive to note that a number of students who reported high
academic self-esteem also reported high discounting 44 (9.8%) and devaluing 8 (1.8%). Findings also clearly indicate that even among students with low academic self-esteem, academic achievement was valued going by the high number of students who reported low discounting and devaluing. From the descriptive findings, three conclusions can be made; first, there seems to be a negative relationship between academic self-esteem and both discounting and devaluing; secondly, academic achievement is a valued domain; and finally, high academic self-esteem students have a need to self-protect.

b. Hypothesis Testing

In order to determine the extent to which academic self-esteem varied between male and female students in secondary schools, the following null hypothesis was formulated:

H₀: There are no significant differences in academic self-esteem between male and female students in national, sub-county and private secondary schools.

Variations in students' academic self-esteem was examined using a 2 (Gender: Male, Female) × 3 (School type: National, Sub-county, Private) ANOVA. There were no significant main effects of gender, \( F(1, 444) = 2.15, p = .143 \), and type of school, \( F(2, 444) = 0.79, p = .451 \). Evidence failed to reject the null hypothesis. The findings were presented in Table 4.12.
Table 4.12

ANOVA for Academic Self-esteem

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>131649.08</td>
<td>1</td>
<td>131649.08</td>
<td>5168.94</td>
<td>.000</td>
</tr>
<tr>
<td>Gender</td>
<td>54.81</td>
<td>1</td>
<td>54.81</td>
<td>2.15</td>
<td>.143</td>
</tr>
<tr>
<td>SchType</td>
<td>40.67</td>
<td>2</td>
<td>20.33</td>
<td>.79</td>
<td>.451</td>
</tr>
<tr>
<td>Gender * SchType</td>
<td>133.89</td>
<td>1</td>
<td>133.89</td>
<td>5.25</td>
<td>.022</td>
</tr>
<tr>
<td>Total</td>
<td>224707.00</td>
<td>449</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: * = Significant at 0.05 level

There was a significant interaction effect, $F(1, 444) = 5.25, p = .022, \eta^2 = .01$.

The results were presented in Figure 4.2. Figure 4.2 shows that levels of academic self-esteem varied as a function of the interaction of gender and type of school. Levels of academic self-esteem were almost equal for female students in the national school ($M = 22.31, SE = 0.81$) as they were for male students in private schools ($M = 22.55, SE = 0.70$). However, levels of academic self-esteem were significantly lower for female students in private schools ($M = 20.37, SE = 0.72$) compared to males in private schools ($M = 22.55, SE = 0.70$) and both male and female students in national and sub-county schools.

Simple main effects of gender within each level of type of school was significant only for private schools, $F(1, 444) = 4.66, p = .031, \eta^2 = 0.01$. The mean of academic self-esteem of female students in private schools was significantly different from females in national ($M = 22.31, SE = 0.81$) and sub-county schools ($M = 22.05, SE = 0.40$).
Further, to establish whether academic achievement led to variations in academic self-esteem, a supplementary null hypothesis was formulated.

$H_{02.1}$: There are no significant differences in academic self-esteem for poor, average and high performing students.

A one-way ANOVA was conducted to establish whether academic self-esteem varied among poor, average and high performing students. There was a statistically significant difference at the $p < 0.05$ level in academic self-esteem,
$F(2, 446) = 15.93$, $p < .001$, $\eta^2 = 0.06$. Evidence led to the rejection of the null hypothesis. The results were reported in Table 4.13.

**Table 4.13**

**ANOVA for Differences in Academic Self-esteem by Academic Achievement**

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>764.26</td>
<td>2</td>
<td>382.13</td>
<td>15.93</td>
<td>.000</td>
</tr>
<tr>
<td>Within Groups</td>
<td>10699.47</td>
<td>446</td>
<td>23.99</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>11463.74</td>
<td>448</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Subsequent post-hoc pairwise comparisons using the Tukey HSD test indicated that all the three scores significantly varied from each other. The findings were presented in Table 4.14.

**Table 4.14**

**Post hoc Analysis of Academic Self-esteem**

<table>
<thead>
<tr>
<th>(I) Cumulative Average</th>
<th>(J) Cumulative Average</th>
<th>Mean Difference (I-J)</th>
<th>Std. Error</th>
<th>Sig.</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Lower Bound</td>
</tr>
<tr>
<td>Poor</td>
<td>Average</td>
<td>-1.72*</td>
<td>.66</td>
<td>.025</td>
<td>-3.26</td>
</tr>
<tr>
<td>High</td>
<td></td>
<td>-4.51*</td>
<td>.82</td>
<td>.000</td>
<td>-6.43</td>
</tr>
<tr>
<td>Average</td>
<td>Poor</td>
<td>1.72*</td>
<td>.66</td>
<td>.025</td>
<td>.18</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>-2.79*</td>
<td>.63</td>
<td>.000</td>
<td>-4.27</td>
</tr>
<tr>
<td>High</td>
<td>Poor</td>
<td>4.51*</td>
<td>.82</td>
<td>.000</td>
<td>2.58</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>2.79*</td>
<td>.63</td>
<td>.000</td>
<td>1.30</td>
</tr>
</tbody>
</table>

*Note:* *The mean difference is significant at the 0.05 level

Findings from Table 4.14 show that the mean scores on academic self-esteem for poor ($M = 19.87$, $SE = 0.58$), average ($M = 21.59$, $SE = 0.28$) and high performing students ($M = 24.37$, $SE = 0.24$) respectively were significantly
different. The poor performers were therefore found to have the lowest means on academic self-esteem.

c. Qualitative Analysis

According to the Self-worth Theory and the Self Theory of Personality Development, students perceive grades in relation to how much ability they are able to exhibit. Failure in academics confirms to them that they are worthless. The conditions of worth that bad grades present imply that students must find a way to hold their esteem high despite failure. When asked what makes students not to attend school and when they do, maintain passivity in class, Participant A said that it is;

because they feel that they lack ability and fear trying to participate because their friends and teachers will know that they are not able. They do want to say that they are unable but you will always know them by their actions”.

When asked what was wrong if it is known that a student is "not able", Participant A said that,

First, it is like stigma – they are stigmatised by peers that they are not clever – they are stupid.

It was found that more boys will be affected by peer judgement because they are socialised to feel "able". This enables them to escape "labelling" by girls and their peers. According to Teacher I, for girls, feelings of not being "able" do not trouble them because "women are the weaker sex and are okay with it". It was found out that creating the impression that one is "able" is so important
in students' self-evaluation. All participants believed that when students feel "able", they earn elevated status and makes them look "unique". It was determined that students who top their classes earn higher status and the respect of classmates. Teacher C said that when students compete and one comes out top, they have elevated feelings of self. As she put, "if I am number one, people will know that I am good", adding that "everyone wants to be like those who are 'choppies' (those who read) and they earn more respect among their classmates but more in lower classes".

Teacher G sought to explain why boys are more prone to stake their self-esteem on ability by arguing that boys share examination scripts with peers from other schools and scoring high marks on tests is one such way of affirming their "manhood". They would prefer to maintain a positive "intellectual image" among peers. It also emerged that education is valued across all cultures represented in this study. Teacher I suggested that among Arab and Indian cultures (as in many other cultures), men are socialised to be independent, to lead and ultimately to marry and that is the reason why they cannot devalue school achievement. Surprisingly, Teacher I added that girls' education is valued because "an educated girl will get a better suitor and make a better wife", a view that was endorsed by Teacher D. Put together, this suggests that girls are compelled to value education though it has no link with job-related outcomes in the future. For the girls, as Teacher I said, it becomes a case of "even if it is going through the system, I want to get the best out of it" and so they remain motivated to coast through.
During the study, an unanticipated theme emerged. It was found that students from schools known for academic excellence have higher group esteem than those from poor performing schools. Even if the students feel "unable" at a personal level, the fact that they attend such schools gives them higher academic self-esteem by association. In the words of Teacher A;

If a student is from a school where the highest score in KCSE is a D, they cannot mix with peers from better performing schools because they feel low. During our meetings of 'A' Academy students (organised by the County Education Office for high performing students), you will find that top students from poor performing schools do not participate in discussion but remain quiet and do not mix during breaks. Even those students who attend 'A' Academy meetings are not equal because grade A in a top performing school and grade A of a poor performing school are different.

An example is cited of two neighbouring girls' schools – one national and the other sub-county who do not mingle during such meetings because the latter group feel of lower status. Teacher I concurred giving her own experience of arriving in her current school when its performance was dropping but students picking up their confidence when they were informed that her immediate former school was an academic giant. Teacher F agreed, saying that "those who come from primary schools which exposed them to activities that build esteem like debating clubs carry high self-esteem even when they joined our school". 
d. Discussion of Findings

Quantitative analysis showed no significant differences between male and female students in students' academic self-esteem. However, an interaction was found between gender and type of school, with female students in private schools reporting significantly lower academic self-esteem. The implication is that overall across the three schools, students valued the academic domain in equal measure. This finding is consistent with Crocker et al. (2003) who found out that all students tended to identify more with their major on good-grade and less on bad-grade days and disidentification on bad-grade days was stronger for academically contingent students. However, female engineering students in their study disidentified more on bad-grade days. This was explained to be a result of negative stereotypes about women's ability in mathematics and their supposed lack of intellect to succeed in engineering. It is likely that academic self-esteem is context-specific, with female students in private schools specifically affected.

The finding concerning the simple main effects of gender on academic self-esteem support Ridgers et al. (2007) who found out that girls had lower perceptions of athletic competence than boys. The findings also support Beaton et al. (2014) and Tougas et al. (2005) who found that females reported lowered self-esteem when faced with discrimination.

The finding of a positive relationship between grades and academic self-esteem corroborates other findings (Crocker & Luhtanen, 2003; Crocker et al., 2003)
concerning contingencies of self-worth. The implication is that basing self-worth on academics is related to lowered academic self-esteem especially in instances of repeated failure. The finding also supports Crocker and Wolfe (2001) who found out that self-esteem varies as a function of feedback in a domain of interest.

An interesting descriptive finding of this study was that a number of students who reported high academic self-esteem also reported high levels of discounting and devaluing. This seems to support findings of Major and Schmader (1998) who found students with high GPAs also discounting the validity of tests more than did students with low GPAs. These two studies are consistent in finding that students who perform higher than teachers expect will equally discount and devalue to self-protect.

Qualitative findings provide evidence of Covington's Self-worth model where ability = worth. Students, especially boys were found to show their "manhood" if they performed well in school. Findings also show that female students in private schools (all coeducational) fell back on the "weaker sex" stereotype when their self-esteem was threatened. This was done as a way of dealing with conflict: on the one hand, society values education, and on the other, their chances of mobility are limited despite their efforts. They therefore discounted the validity of feedback by attributing it to their inferior status in society. Put together, these two findings support Rogers' postulation that self-worth is socially developed and society imposes conditions of worth that are external to
the individual. The resulting incongruence can be seen in girls having lower academic self-esteem.

On the whole, these findings confirm that efforts to maintain, enhance, and protect self-esteem will be concentrated on domains on which self-worth is contingent (Wolfe & Crocker, 2003). When failure occurs, students will engage self-protective strategies to maintain self-esteem. Quantitative and qualitative findings show that achieving success and avoiding failure in the academic domain is personally important because success is (a) valued in one’s culture, (b) a means to a desired end, (c) important to one’s friends or family, (d) rewarded (or failure is punished (Ogbu, 2003). Additionally, qualitative findings have confirmed that students invest their self-esteem in some domains more than in others.

4.3.3 Extent to which Academic Achievement Predicts Academic Disidentification

The study also sought to establish the extent to which academic achievement predicts academic disidentification. Descriptive analysis of respondents’ mean scores in three successive tests and disidentification was done followed by hypothesis testing and qualitative analysis. Discussion of findings was then done.
a. Description of Students' Academic Achievement and Academic Disidentification

Students' overall marks in eight subjects were computed across three terms. A student's average score was then transformed into a T-score. The highest and lowest scores were 79 and 25 respectively. The mean score was 49.40 and standard deviation was 10. The distribution was positively skewed (0.43) meaning that a slightly higher number of students had low overall performance. The T scores were then grouped into three; low (20-39), average (40-59) and high performance (60-80) and presented in Table 4.15.

Table 4.15

<table>
<thead>
<tr>
<th>Class</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor</td>
<td>68</td>
<td>15.1</td>
</tr>
<tr>
<td>Average</td>
<td>306</td>
<td>68.2</td>
</tr>
<tr>
<td>High</td>
<td>75</td>
<td>16.7</td>
</tr>
<tr>
<td>Total</td>
<td>449</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Findings from Table 4.15 show that slightly more than two-thirds of students posted average academic achievement over the three terms. Almost equal numbers of students posted low and high achievement respectively.

To establish whether male and female students' academic achievement varied as a function of gender and type of school, descriptive analysis was done. The results were presented in Table 4.16.
Table 4.16

*Descriptive Statistics of Academic Achievement*

<table>
<thead>
<tr>
<th></th>
<th>Poor</th>
<th>Average</th>
<th>High</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>f</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Gender</td>
<td>f</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Male</td>
<td>34</td>
<td>7.6</td>
<td>32.7</td>
<td>5.6</td>
</tr>
<tr>
<td>Female</td>
<td>34</td>
<td>7.6</td>
<td>35.6</td>
<td>10.9</td>
</tr>
<tr>
<td>National</td>
<td>f</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>S/county</td>
<td>f</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>National</td>
<td>0</td>
<td>0</td>
<td>3.3</td>
<td>5.1</td>
</tr>
<tr>
<td>S/county</td>
<td>60</td>
<td>13.4</td>
<td>50.8</td>
<td>5.1</td>
</tr>
<tr>
<td>Private</td>
<td>f</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>1.7</td>
<td>14.3</td>
<td>6.2</td>
</tr>
<tr>
<td>Total</td>
<td>f</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td></td>
<td>68</td>
<td>15.1</td>
<td>68.4</td>
<td>16.5</td>
</tr>
</tbody>
</table>

*Note: f = frequency, ToS = Type of School, S/county = Sub-county*

Table 4.16 shows that over a third of students had average achievement while almost equal proportions were poor and high achievers respectively. Findings also show that more females were consistently high achievers compared to their male counterparts.

The study also sought to compare the three groups of low, average and high achievement on their levels of discounting and devaluing. Results were presented in Table 4.17. Table 4.17 shows that almost four times more students discounted feedback than devalued academic achievement. It also shows that students were less likely to discount the validity of feedback and devalue academic achievement if their academic achievement was high.
Table 4.17

Descriptive Statistics of Academic Disidentification by Academic Achievement

<table>
<thead>
<tr>
<th>Score</th>
<th>Discounting</th>
<th>Devaluing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Poor</td>
<td>50</td>
<td>11.1</td>
</tr>
<tr>
<td>Average</td>
<td>228</td>
<td>50.8</td>
</tr>
<tr>
<td>High</td>
<td>63</td>
<td>14.0</td>
</tr>
<tr>
<td>Total</td>
<td>341</td>
<td>75.9</td>
</tr>
</tbody>
</table>

Note: a = percent within discounting. b = percent within devaluing

b. Hypothesis Testing

In line with objective three, the study sought to establish whether academic achievement significantly predicted disidentification among secondary school students. The following hypothesis was formulated:

H₀³: Academic achievement does not significantly predict academic disidentification among secondary school students.

To achieve this, two supplementary null hypotheses were formulated.

H₀³.₁: Academic achievement does not significantly predict discounting among secondary school students.

H₀³.₂: Academic achievement does not significantly predict devaluing among secondary school students.

Simple linear regression analysis was performed in order to determine if academic achievement significantly predicted discounting and devaluing respectively. Academic achievement was not found to significantly predict discounting, \( F(1, 447) = 1.76, p = .185 \). Findings therefore failed to reject the
first supplementary hypothesis. The regression equation for devaluing was found to be statistically significant, \( F(1, 447) = 10.99, p < .001 \), indicating that academic achievement is a significant predictor of devaluing. Findings led to the rejection of the second supplementary hypothesis. Academic achievement was found to predict more devaluing, \( (\beta = -0.58, SE = 0.25) \) than discounting \( (\beta = -0.33, SE = 0.17) \). The results of the regression analysis were presented in Table 4.18.

**Table 4.18**

<table>
<thead>
<tr>
<th></th>
<th>( R^2 )</th>
<th>( \beta )</th>
<th>( SE )</th>
<th>( p )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discounting</td>
<td>0.00</td>
<td>-0.33</td>
<td>0.25</td>
<td>.185</td>
</tr>
<tr>
<td>Devaluing</td>
<td>0.02</td>
<td>-0.58</td>
<td>0.17</td>
<td>.001</td>
</tr>
</tbody>
</table>

Table 4.18 indicates that academic achievement negatively predicts both discounting and devaluing. High achievers are less likely to discount feedback and devalue academic achievement while poor academic achievement is likely to be associated with high discounting and devaluing.

Further, the study sought to establish whether there were significant differences in academic disidentification on the basis of variations in academic achievement. One-way ANOVA was conducted to find out whether differences in academic achievement led to differences in discounting and devaluing respectively among students divided into three groups; poor, average and high achievement. In the first test, there were no statistically significant differences
between group means on discounting, $F(2, 446) = 1.38$, $p = .25$ at the 0.05 level. In the second test, there was a statistically significant difference at the $p < 0.05$ level, $F(2, 446) = 6.25$, $p = .002$. The findings were presented in Table 4.19.

**Table 4.19**

*ANOVA for Differences in Devaluing by Academic Achievement*

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>3.47</td>
<td>2</td>
<td>1.73</td>
<td>6.26</td>
<td>.002</td>
</tr>
<tr>
<td>Within Groups</td>
<td>123.59</td>
<td>446</td>
<td>.28</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>127.06</td>
<td>448</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Post-hoc pairwise comparisons using the Tukey HSD test indicated that the mean score for poor ($M = 6.14, SD = 2.80$) and high achievement group ($M = 4.97, SD = 1.43$) respectively were significantly different from the average achievement group ($M = 5.27, SD = 2.06$). The poor academic achievement group was therefore found to have the highest means on devaluing. There was no statistically significant difference in mean scores of devaluing between average and high achievement group. The post hoc findings were presented in Table 4.20.
Table 4.20

Post hoc Analysis of Academic Disidentification by Academic Achievement

<table>
<thead>
<tr>
<th>(I) T-score</th>
<th>(J) T-score</th>
<th>Mean Difference (I-J)</th>
<th>Std. Error</th>
<th>Sig.</th>
<th>95% CI Lower Bound</th>
<th>95% CI Upper Bound</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Average</td>
<td>Low Average</td>
<td>0.22*</td>
<td>0.08</td>
<td>.006</td>
<td>0.05</td>
<td>0.38</td>
</tr>
<tr>
<td>High Average</td>
<td>Low Average</td>
<td>-0.22*</td>
<td>0.07</td>
<td>.006</td>
<td>-0.38</td>
<td>-0.05</td>
</tr>
<tr>
<td>High Average</td>
<td>Low Average</td>
<td>0.08</td>
<td>0.07</td>
<td>.513</td>
<td>-0.09</td>
<td>0.24</td>
</tr>
<tr>
<td>High Average</td>
<td>Average Low</td>
<td>-0.29*</td>
<td>0.09</td>
<td>.003</td>
<td>-0.50</td>
<td>-0.09</td>
</tr>
<tr>
<td>High Average</td>
<td>Average High</td>
<td>-0.08</td>
<td>0.07</td>
<td>.513</td>
<td>-0.24</td>
<td>0.09</td>
</tr>
</tbody>
</table>

Note: The mean difference is significant at the 0.05 level

c. Qualitative Analysis

In line with self-theories and literature reviewed, students are more likely to experience a reduction in their self-worth in the context of repeated failure. Participants reported that the average marks for form one admission ranged from 220 for sub-county schools and private schools and 390 for the national school. This means that students' average performance per subject as they transited from primary to secondary school was 44 and 78 for sub-county and private schools, and national school respectively.

The study sought to explore the background surrounding the administration of tests in order to establish the extent to which it affected academic self-esteem and ultimately disidentification. It was found out that schools had different formats for test administration. The average number of tests in a term for sub-county schools was three while one of the private schools scheduled a random assessment test (RAT) every week. Both continuous (CATs) and random...
assessment tests (RATs) were given in the national school. What came out is
that there was a higher frequency of tests in the national and one private
school.

With the exception of Teacher I, others from coeducational schools (Teacher D
and Teacher H) reported that boys performed higher than girls. Asked to
describe how students perceive tests, the overwhelming opinion was
"negatively". According to Teacher C, they do not perceive tests positively
because "it means you have to read...if you don't perform well, someone will
ask you what is wrong...and there is a minimum you have to get to be in good
books". According to Teacher I, students in her school have seen too many
exams to the point that they are indifferent to tests. As she put it, "by the end of
week three, four exams have been marked, returned and discussed". However,
she added that reactions to end of year examinations were distinctly different
because students who scored straight A's are usually awarded a scholarship the
following term. Those who come at the top of the class are usually happy
because of the fees waiver while those who fail will look disappointed.
Contrastingly, those who fail will show negative emotions because they expect
scolding at home, or being "advised" by teachers to repeat a class or being
summarily discontinued from school.

Differences were seen in affective reactions to grades on the basis of gender
and type of school. Teacher A, F, J and K reported that girls panic when tests
are due with some falling sick while others actually fail to sit the tests. When
asked why girls panic, Teacher A said that "they are not prepared and they fear failing". When reasons for fear of failing were sought, participants said that it is because they will be laughed at by their peers and will most likely be threatened by their parents at home. Such students prefer "falling sick" to sitting the tests so that reasons for failure are shifted to "sickness". According to Teacher G not all boys attend tests. Some miss papers they perceive to be "difficult", while others feign sickness. The reasons for missing some papers may range from "misreading the timetable" to unexplained sickness.

It was necessary for the study to find out the process by which tension is built during test time. With the exception of Teacher I who took considerably shorter time marking scripts, all teachers took between one and two weeks between administering tests and returning the scripts to students. The participants reported that when scripts are marked, they are graded and arranged in order of lowest to highest or vice-versa and presented to students in the classroom. It was also reported that comments are written on the scripts. During presentation of the scripts, students who performed well were reported to be happy, jump around and display their scripts to everyone. Students who failed prefer hiding their scripts. Teacher G vividly captured the ensuing tension among students at such a time. He narrated;

Before I start calling out names from the scripts which I have arranged in order of performance, I tell them about the range of marks...the highest and lowest and the midpoint. Then I call out the names of the poorest performers and ask them what went wrong. If they have
something to say, they say...it is always in relation to the test having been difficult. Most of the time they just keep quiet. When I finish the top half, I tell them that we are now starting the bottom half. Students who fail do not allow anyone to pick their scripts even when they sit in the back rows. Such students "lose" the scripts in case they are required for revision later while some tear off the part bearing the mark or change the mark by themselves.

However, Teacher I presented a distinctly different scenario. It was noted that students in her school sit for RATs every Monday from 11-2 pm and have "become immune" to emotional reactions to test results. Like students of Teacher I, Teacher A said that her students almost looked unemotional when they failed but elated when they passed. Teacher J commented that those who fail have the most questions to ask related to being added marks by the teacher for answers that they think were wrongly marked. Teacher F said that some girls do not even pick the papers "since they already know what to expect". A worrying view was presented by Teacher K who said that her girls who fail laugh as they pick the scripts and immediately "lose" them. This seems to tally with her earlier view that over half her class is apathetic to class work.

Asked to identify the kind of comments usually written on scripts, Teacher A mentioned "work harder" and "wake up" for poor performers and "good" for high performers while Teacher J cited "good", "see me", and "five marks deducted" among others. Asked whether comments are linked to performance on succeeding tests, most participants agreed. As aptly put by Teacher A;
When you tell a student to put more effort, next time they sit the exam they improve in performance because they realise that they are not performing to their full potential, so they wake up.

However, most participants agreed that there are comments that "can break the student" especially comments directed at the person of the student. Such comments include "why did your parent bring you to school"? or "stop wasting your parents' money" or "stupid". It was agreed that though teachers' intentions be noble, negative comments end up "breaking the student". This was supported by Teacher G who said that when a teacher gives negative comments such as "try something else", it creates a sense of self-judgment in the learner which leads to giving up. Consensus was also reached that a student who failed in a previous test is likely to fail again in the next test if the comment accompanying the previous test is negative. Such a student is also likely to improve if the comment accompanying the previous grade is positive because the student feels a need to invest effort. As said by Teacher A, if a student registers an 'E' and the teacher comments "you can do better", the student puts in more effort and improves in the succeeding test.

One way that tests were found to contribute to investment or withdrawal of effort in academics is through the rewards and punishment that follow success and failure. Almost equal numbers of participants reported that a reward of some sort was offered to top performing students. While vouchers were reported by Teacher C, a one-term scholarship covering fees was reported by Teacher I. In sub-county schools and the other two private schools, rewards
ranged from appearing top in the overall class list to receiving exercise books, rulers and pens for good performance. These rewards were found to have no worth because they were easily affordable by everyone, including those students who scored poorly. All participants agreed that reward was important for maintaining students' competition in class. A number of participants also agreed that it was easier for students to be punished for poor performance through class retention, than it was to be rewarded. For instance, Teacher A said that in their school, students who performed poorly were automatically referred to the counselling teacher while Teacher E said that those who fail, especially in mathematics are punished. Teachers were unanimous that punishment for academic performance was a reason for students to devalue educational achievement.

d. Discussion of Findings

Quantitative analysis found out that more females than males consistently posted high performance and that both male and female students were equal in poor performance. The first finding was not confirmed by qualitative analysis which returned mixed findings concerning performance among boys and girls. The quantitative finding supports Cokley and Moore (2007) who found out that gender accounted for approximately 3% of the overall variance in GPA with women having higher GPA than males. In this study, descriptive analysis showed that type of school was related to performance with no students from the national school in the poor performance category.
Inferential analysis found significant differences in devaluing but not discounting on the basis of grades. Findings therefore indicate that poor performing students reported the highest devaluing. These findings contradict Brunstein and Gollwitzer's (1996) findings in one of two experimental studies among a sample of medical students at the University of Erlangen. It was found out that medical students exposed to failure concerning their social competence as physicians enhanced performance on a task when it was said to assess an aptitude relevant to being a successful physician. While students in Brunstein and Gollwitzer's study persisted, students in this study devalued after repeated failure. The differences in findings could be attributed to differences in samples. In the first study, it is expected that studying medicine at university should be strongly linked to identification with career path more than secondary school students in this study who are yet to identify a specific path for themselves.

The finding of an insignificant relationship between grades and discounting contradicts findings of other studies (Nussbaum & Steele, 2007; Regner & Loose, 2006; Stephan et al., 2010) who found out that grades significantly predicted discounting but not devaluing. Devaluing by its very nature was expected to reflect more enduring, stable attitudes (Major et al., 1998) and hence was not expected to fluctuate. The finding may however support the assertion that devaluing is an adaptive process that is useful in coping with excessive esteem-threatening situations, such as competitive failure (Brewer et al., 1999). According to this perspective, devaluing academics is adaptive
because it contributes to the reduction of emotional reactivity as a result of negative situations such as poor grades. This is because students who highly identify with academics are likely to suffer emotional or behavioural consequences in case of repeated failure. This happens when individuals persist on a task even when ability is low. It is therefore probable that students in this study devalue academic achievement as a way of esteem-affirmation, and then spring back to the path of motivation later. The findings therefore extend other findings that have found disidentification to be adaptive.

The findings of this study also contradict Nussbaum and Steele (1997) who suggest that individuals deal with failure by persisting or situationally disengaging and instead support Steele (1997) and Major and Schmader (1998) who find temporal disidentification linked to chronic disidentification and decrease in motivation. It might be that students in this sample went through small and successive steps of situational disengagement to the point that it became chronic, thus reporting higher devaluing than discounting. Though the relationship between grades and discounting was insignificant, findings in this study extend the finding of Regner and Loose (2006) who found that grades negatively predicted discounting and devaluing.

Qualitative findings point to the fact that examinations are an emotionally draining experience generally and esteem threatening specifically. Students have to wait between a week and two to know their fate which is then openly revealed in front of their peers, girlfriends and boyfriends. Findings also show
that grades by themselves do not lead to students giving up, but the negative comments accompanying grades do. This seems to support findings by Skipper and Douglas (2011) who found that good praise was positively related to persistence after failure.

### 4.3.4 Extent to which Attribution Orientations Predict Academic Disidentification

The study also sought to find out the extent to which causal attributions predicted academic disidentification. Descriptive analysis of respondents' attributions was done followed by hypothesis testing and qualitative analysis. Findings were then discussed in the final section.

#### a. Description of Respondents' Attribution Orientations

To find the extent to which students' attribution orientations predicted academic disidentification, descriptive analysis of respondents' locus and stability attributions was done. The study first sought to describe respondents' attributions of ability, effort, context and luck. The findings were presented in Table 4.21. Findings from Table 4.21 indicate that more female 169 (37.9%) than male 126 (28.1%) students held high ability attributions. More female 56 (12.5%) than male 33 (7.4%) students respectively also reported high external attributions of context and luck. Majority of the students reported ability and effort attributions. One interesting finding was that equal numbers of students in the national school reported low and high ability attributions respectively.
Table 4.21

Descriptive Statistics of Causal Attributions

<table>
<thead>
<tr>
<th>Attribution orientations</th>
<th>Ability</th>
<th>Effort</th>
<th>Context</th>
<th>Luck</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>80</td>
<td>17.8</td>
<td>40</td>
<td>8.9</td>
</tr>
<tr>
<td>High</td>
<td>126</td>
<td>28.1</td>
<td>166</td>
<td>37.0</td>
</tr>
<tr>
<td>Female</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>74</td>
<td>16.5</td>
<td>24</td>
<td>5.3</td>
</tr>
<tr>
<td>High</td>
<td>169</td>
<td>37.9</td>
<td>219</td>
<td>48.8</td>
</tr>
<tr>
<td>ToS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>National</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>19</td>
<td>4.3</td>
<td>4</td>
<td>0.9</td>
</tr>
<tr>
<td>High</td>
<td>19</td>
<td>4.3</td>
<td>34</td>
<td>7.6</td>
</tr>
<tr>
<td>Subcounty</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>91</td>
<td>20.3</td>
<td>43</td>
<td>9.6</td>
</tr>
<tr>
<td>High</td>
<td>220</td>
<td>49.0</td>
<td>268</td>
<td>59.7</td>
</tr>
<tr>
<td>Private</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>44</td>
<td>9.8</td>
<td>17</td>
<td>3.8</td>
</tr>
<tr>
<td>High</td>
<td>56</td>
<td>12.5</td>
<td>83</td>
<td>18.5</td>
</tr>
</tbody>
</table>

Note: ToS = Type of School

Secondly, the study sought to establish the distribution of respondents’ locus scores. To achieve this, ability and effort scores on the MMCS were computed to derive the internal locus while context and luck scores comprised the external locus. The findings were presented in Table 4.22. Findings from Table 4.22 show that majority of students 435 (96.8) reported internal as opposed to external attributions 14 (3.2%). While equal numbers of male and female students held external attributions, more female than male students held internal attributions.
Table 4.22

Descriptive Statistics of Locus Attributions

<table>
<thead>
<tr>
<th>Locus</th>
<th>External</th>
<th>Internal</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>f</td>
<td>%</td>
<td>f</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>7</td>
<td>1.6</td>
<td>199</td>
</tr>
<tr>
<td>Female</td>
<td>7</td>
<td>1.6</td>
<td>236</td>
</tr>
<tr>
<td>Total</td>
<td>14</td>
<td>3.2</td>
<td>435</td>
</tr>
<tr>
<td>ToS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>National</td>
<td>3</td>
<td>0.7</td>
<td>35</td>
</tr>
<tr>
<td>Sub-county</td>
<td>3</td>
<td>0.7</td>
<td>308</td>
</tr>
<tr>
<td>Private</td>
<td>8</td>
<td>1.8</td>
<td>92</td>
</tr>
<tr>
<td>Total</td>
<td>14</td>
<td>3.2</td>
<td>435</td>
</tr>
</tbody>
</table>

Note: ToS = Type of School

The study then sought to describe respondents' stability attributions on the basis of gender and type of school. To achieve this, ability and context scores on the MMCS were computed to derive stable dimension while effort and luck scores comprised the unstable dimension. The results were presented in Table 4.23.

Table 4.23

Descriptive Statistics of Stability Attributions

<table>
<thead>
<tr>
<th>Stability</th>
<th>Unstable</th>
<th>Stable</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>f</td>
<td>%</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>156</td>
<td>34.7</td>
</tr>
<tr>
<td>Female</td>
<td>203</td>
<td>45.2</td>
</tr>
<tr>
<td>Total</td>
<td>359</td>
<td>79.9</td>
</tr>
<tr>
<td>ToS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>National</td>
<td>36</td>
<td>8.0</td>
</tr>
<tr>
<td>Sub-county</td>
<td>244</td>
<td>54.3</td>
</tr>
<tr>
<td>Private</td>
<td>79</td>
<td>17.6</td>
</tr>
<tr>
<td>Total</td>
<td>359</td>
<td>79.9</td>
</tr>
</tbody>
</table>

Note: ToS = Type of School
Findings from Table 4.23 indicate that more female than male students held unstable attributions while more male than female students held stable attributions.

Finally, the study sought to examine the distribution of respondents' external and internal attributions of success and failure. The findings were presented in Table 4.24.

**Table 4.24**

**Descriptive Statistics of Internal and External Attributions for Success and Failure**

<table>
<thead>
<tr>
<th>Attribution</th>
<th>Success</th>
<th>Internal</th>
<th>f</th>
<th>%</th>
<th>External</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td></td>
<td></td>
<td>158</td>
<td>35.2</td>
<td>428</td>
<td>95.3</td>
<td></td>
</tr>
<tr>
<td>High</td>
<td></td>
<td></td>
<td>291</td>
<td>64.8</td>
<td>21</td>
<td>4.7</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>449</td>
<td>100.0</td>
<td>449</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Findings from Table 4.24 indicate that up to two-thirds of students held internal attributions for success. Interestingly, a third of students held internal attributions for failure. A small number of students attributed their success and failure to external causes.

**b. Hypothesis Testing**

To determine the extent to which attributions predict academic disidentification in line with objective four of the study, the following null hypothesis was formulated:
H04: Causal attributions do not significantly predict academic disidentification of secondary school students. 

To test this hypothesis, six supplementary null hypotheses were formulated and simple linear regression used to establish the extent to which each set of predictors contributed to discounting and devaluing.

H04.1: Ability, effort, context and luck attribution orientations do not significantly predict discounting.

H04.2: Ability, effort, context and luck attribution orientations do not significantly predict devaluing.

H04.3: Stability attributions do not significantly predict discounting.

H04.4: Stability attributions do not significantly predict devaluing.

H04.5: External and internal attributions of success and failure do not significantly predict discounting.

H04.6: External and internal attributions of success and failure do not significantly predict devaluing.

i. First Supplementary Null Hypothesis

H04.1: Ability, effort, context and luck attribution orientations do not significantly predict discounting.

A simple linear regression was run to predict discounting from attributions to ability, effort, context and luck. The linear combination of the four attributions was significant, \( F(4, 444) = 17.72, p < .001, R^2 = 0.13 \). The first supplementary null hypothesis was therefore rejected. However, while attributions to ability
and context were significant predictors of discounting, attributions to effort and luck were insignificant. The results were presented in Table 4.25.

**Table 4.25**

*Summary of Regression Model for Attributions on Discounting*

<table>
<thead>
<tr>
<th>Model</th>
<th>β</th>
<th>SE</th>
<th>Beta</th>
<th>ΔR²</th>
<th>R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>9.64</td>
<td>0.84</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ability</td>
<td>-0.50*</td>
<td>0.22</td>
<td>-0.10</td>
<td>0.01</td>
<td></td>
</tr>
<tr>
<td>Effort</td>
<td>-0.43</td>
<td>0.23</td>
<td>-0.08</td>
<td>0.01</td>
<td>0.13**</td>
</tr>
<tr>
<td>Context</td>
<td>1.26**</td>
<td>0.18</td>
<td>0.33</td>
<td>0.11</td>
<td></td>
</tr>
<tr>
<td>Luck</td>
<td>0.06</td>
<td>0.20</td>
<td>0.01</td>
<td>0.00</td>
<td></td>
</tr>
</tbody>
</table>

*Note: * = p < .05, ** = p < .001*

Based on the results in Table 4.25, attributions to luck (R² change = 0.00) appear to offer little additional predictive power beyond that contributed by ability, effort and context attributions. The equation from this output was presented as:

Discounting = 9.64 – (0.50 × Ability) – (0.43 × Effort) + (1.26 × Context) + (0.06 × Luck).

These results show that students are less likely to discount feedback if they hold ability attributions while they are more likely to discount if they hold context attributions.

**ii. Second Supplementary Null Hypothesis**

H₀₄.2: Ability, effort, context and luck attribution orientations do not significantly predict devaluing.
A simple linear regression analysis was conducted to predict the overall contribution of attributions to ability, effort, context and luck to devaluing. The results of this analysis indicated a significant model, \( F(4, 444) = 9.73, p < .001, R^2 = 0.08 \). The evidence led to the rejection of the second supplementary hypothesis. Though the overall model was significant, attributions to ability and luck were insignificant. The results were presented in Table 4.26.

Table 4.26

Summary of Regression Model for Attributions on Devaluing

<table>
<thead>
<tr>
<th>Model</th>
<th>( \beta )</th>
<th>SE</th>
<th>Beta</th>
<th>( \Delta R^2 )</th>
<th>( R^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>7.29</td>
<td>0.61</td>
<td></td>
<td>0.01</td>
<td></td>
</tr>
<tr>
<td>Ability</td>
<td>-0.22</td>
<td>0.16</td>
<td>-0.06</td>
<td>0.03</td>
<td>0.08**</td>
</tr>
<tr>
<td>Effort</td>
<td>-0.65**</td>
<td>0.16</td>
<td>-0.18</td>
<td>0.03</td>
<td></td>
</tr>
<tr>
<td>Context</td>
<td>0.43*</td>
<td>0.13</td>
<td>0.16</td>
<td>0.03</td>
<td></td>
</tr>
<tr>
<td>Luck</td>
<td>0.09</td>
<td>0.14</td>
<td>0.03</td>
<td>0.00</td>
<td></td>
</tr>
</tbody>
</table>

Note: * = \( p < .05 \), ** = \( p < .001 \)

The equation from this output was presented thus:

\[
\text{Devaluing} = 7.29 - (0.22 \times \text{Ability}) - (0.65 \times \text{Effort}) + (0.43 \times \text{Context}) + (0.09 \times \text{Luck}).
\]

Results of the analysis presented in Table 4.26 suggest that students were less likely to devalue academic achievement if they held effort attributions and most likely to devalue if they held context attributions.

iii. Third Supplementary Null Hypothesis

\( H_{04.3} \): Stability attributions do not significantly predict discounting.
In order to test the extent to which respondents’ unstable and stable attributions predicted discounting, a simple linear regression analysis was done. The linear combination of stable and unstable attributions significantly predicted discounting, \( F(2, 446) = 9.31, p < .001, R^2 = 0.04 \). The third supplementary hypothesis was therefore rejected. The findings were presented in Table 4.27.

**Table 4.27**

<table>
<thead>
<tr>
<th>Model</th>
<th>( \beta )</th>
<th>SE</th>
<th>Beta</th>
<th>( \Delta R^2 )</th>
<th>( R^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>7.19</td>
<td>0.76</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stable</td>
<td>0.10**</td>
<td>0.02</td>
<td>0.22</td>
<td>0.04</td>
<td>0.04**</td>
</tr>
<tr>
<td>Unstable</td>
<td>-0.03</td>
<td>0.02</td>
<td>-0.07</td>
<td>0.01</td>
<td></td>
</tr>
</tbody>
</table>

*Note: ** = \( p < .001 \)

Table 4.27 shows that while stable attributions significantly positively predicted discounting, \((\beta = 0.10, SE = 0.02, p < .001, R^2 \text{ change} = 0.04)\), unstable attributions insignificantly negatively predicted discounting \((\beta = -0.03, SE = 0.02, p = .205, R^2 = 0.01)\). The regression equation was presented as:

\[
\text{Discounting} = 7.19 + (0.10 \times \text{Stable}) - (0.03 \times \text{Unstable}).
\]

Findings therefore suggest that students are more likely to discount the validity of feedback in school if they hold stable attributions.

**iv. Fourth Supplementary Null Hypothesis**

\( H_{04.4}: \) Stability attributions do not significantly predict devaluing.

A simple linear regression was done to test the predictive power of stable and unstable attributions to devaluing. The overall model was significant, \( F(2, 446) \)
= 3.34, \( p = .036, \ R^2 = 0.01 \). The fourth supplementary null hypothesis was rejected. The findings were presented in Table 4.28.

**Table 4.28**

*Summary of regression model for stability attributions on devaluing*

<table>
<thead>
<tr>
<th>Model</th>
<th>( \beta )</th>
<th>( SE )</th>
<th>Beta</th>
<th>( \Delta R^2 )</th>
<th>( R^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>5.57</td>
<td>0.55</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stable</td>
<td>0.04*</td>
<td>0.02</td>
<td>0.12</td>
<td>0.01</td>
<td>0.02*</td>
</tr>
<tr>
<td>Unstable</td>
<td>-0.04*</td>
<td>0.02</td>
<td>-0.11</td>
<td>0.01</td>
<td>0.02*</td>
</tr>
</tbody>
</table>

*Note: * = \( p < .05 \)

Findings from Table 4.28 show that both stable (\( \beta = 0.04, SE = 0.01, p = .024 \)) and unstable attributions (\( \beta = -0.04, SE = 0.01, p = .033 \)) significantly predicted devaluing. The regression model was presented as:

\[
\text{Devaluing} = 5.56 + (0.04 \times \text{Stable}) - (0.04 \times \text{Unstable})
\]

These findings suggest that stable and unstable attributions equally predict devaluing. However, while stable attributions positively predict devaluing, unstable attributions are negatively correlated with devaluing.

**v. Fifth Supplementary Null Hypothesis**

H\(_{04.5}\): External and internal attributions of success and failure do not significantly predict discounting.

To establish the extent to which external and internal attributions of success and failure predicted discounting, a simple linear regression analysis was done. The linear combination of external and internal attributions of success and
failure significantly predicted discounting $F(4, 444) = 15.70, p < .001, R^2 = 0.12$. The fifth supplementary hypothesis was therefore rejected. The findings were presented in Table 4.29.

### Table 4.29

**Summary of Regression Model for Internal and External Attributions on Discounting**

<table>
<thead>
<tr>
<th>Model</th>
<th>$\beta$</th>
<th>SE</th>
<th>Beta</th>
<th>$\Delta R^2$</th>
<th>$R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>10.06</td>
<td>0.85</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Success Internal</td>
<td>-0.41*</td>
<td>0.12</td>
<td>-0.16</td>
<td>0.03</td>
<td>0.12**</td>
</tr>
<tr>
<td>Success External</td>
<td>0.16</td>
<td>0.10</td>
<td>0.07</td>
<td>0.03</td>
<td></td>
</tr>
<tr>
<td>Failure Internal</td>
<td>-0.06</td>
<td>0.11</td>
<td>-0.02</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>Failure External</td>
<td>0.47**</td>
<td>0.09</td>
<td>0.25</td>
<td>0.04</td>
<td></td>
</tr>
</tbody>
</table>

*Note:* $^* = p < .05$, $^{**} = p < .001$

Findings in Table 4.29 show that internal attributions to success and external attributions to failure significantly predicted discounting while external attributions to success and internal attributions to failure did not. From the output in Table 4.26 the following equation was derived to predict discounting:

$$\text{Discounting} = 10.06 - (0.41 \times \text{Success Internal}) + (0.16 \times \text{Success External}) - (0.06 \times \text{Failure Internal}) + (0.47 \times \text{Failure External}).$$

The results seem to suggest that students having internal attributions for success are less likely to discount feedback and more likely to discount if they hold external attributions for failure.

### vi. Sixth Supplementary Null Hypothesis

H$_{04.6}$: External and internal attributions of success and failure do not significantly predict devaluing.
A simple linear regression analysis was conducted to establish the extent to which external and internal attributions of success and failure predicted devaluing. The linear combination of the four factors significantly predicted devaluing, $F(4, 444) = 12.79, \ p < .001, R^2 = 0.10$. The sixth supplementary null hypothesis was rejected. Internal attributions for success and external attributions for failure significantly predicted devaluing while external attributions for success ($\beta = 0.05, SE = 0.07, p = .502$) and internal attributions for failure ($\beta = 0.03, SE = 0.08, p = .631$) did not. The results were presented in Table 4.30.

**Table 4.30**

*Summary of Regression Model for Internal and External Attributions on Devaluing*

<table>
<thead>
<tr>
<th>Model</th>
<th>$\beta$</th>
<th>$SE$</th>
<th>Beta</th>
<th>$\Delta R^2$</th>
<th>$R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>7.71</td>
<td>0.61</td>
<td></td>
<td></td>
<td>0.10**</td>
</tr>
<tr>
<td>Success Internal</td>
<td>-0.49**</td>
<td>0.08</td>
<td>-0.27</td>
<td>0.07</td>
<td>0.10**</td>
</tr>
<tr>
<td>Success External</td>
<td>0.05</td>
<td>0.07</td>
<td>0.03</td>
<td>0.01</td>
<td></td>
</tr>
<tr>
<td>Failure Internal</td>
<td>0.03</td>
<td>0.08</td>
<td>0.02</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>Failure External</td>
<td>0.17*</td>
<td>0.06</td>
<td>0.13</td>
<td>0.01</td>
<td></td>
</tr>
</tbody>
</table>

*Note: * = $p < .05$, ** = $p < .001$*

The equation from this output is:

\[
\text{Devaluing} = 7.71 - (0.49 \times \text{Success Internal}) + (0.05 \times \text{Success External}) + (0.03 \times \text{Failure Internal}) + (0.17 \times \text{Failure External}).
\]

Findings in Table 4.30 and in the regression model suggest that students who hold internal attributions for success are less likely to devalue academic achievement while those with internal attributions for failure are more likely to devalue.
c. Qualitative Analysis

It was hypothesised that students' attributions would influence the extent to which they discounted and devalued academic achievement due to the variations in motivation that attributions explain. The study sought to explore teachers' experiences with learners' attribution orientations and how they relate to performance and disidentification. All participants identified learners "who know they are clever" with Teacher G reporting an average of 10 out of 40 students in his class. According to the participants, such learners do not need to revise for tests to perform well and they are completely confident, almost "full of themselves".

The study then sought to know how such students realised that they are indeed "clever". Teacher A suggested that it has been drilled in such students over time from early age that they are clever. This was probably done by parents and teachers in their formative stages. While such students usually perform well, when they fail, they think that the teacher was biased in marking while their parents or guardians blame "too much time on the phone or play station" as related by Teacher G and Teacher B. Teacher G related a case of a student who gets sick when he gets a lower grade because he believes that he can never fail.

Participants also reported having students who put in a lot of effort for success. Success and failure for such students is always attributed to effort in academic work; the higher the effort investment, the better their performance. When
participants were asked about the likelihood of effort investment after failure for the groups of students, most participants said that the group who believed in chance factors for success would most likely give up. Teacher G suggested that if students who hold ability attributions fail, it leads to soul-searching which is predictive of positive outcomes in the subsequent tests if such learners have social support. This view was supported by Teachers C, I, D and G who said that once such students fail, they start getting serious and looking for extra tuition, and quite interestingly, once they attain the top marks, they relax again. According to Teacher I, students who attribute success to effort will give up in the context of failure though a few persist when failure occurs. Asked if there are any gender differences in the behaviour, she said that "girls will always give up earlier".

Participants also reported students who believed that spiritual forces or fate determined their success and failure. Participants believed that this attitude was inculcated at home by religious beliefs which hold that some people are born clever and others not clever and that it is beyond human ability to determine how they turn out to be. Additionally, the attribution of failure to external factors of "weaker gender" could seem to propel girls in Teacher I's class not to invest any effort in academics.

Finally, the study sought participants’ opinion about whether failure in one test can predict failure in succeeding tests. Most participants said that the teacher plays a very important role in students' giving up or persisting on a course. As
stated by Teacher A; "if a teacher does not motivate students, a single failure will break the students" and adding that "a student can fail eight times and remain focused on academics depending on the teacher".

d. Discussion of Findings

The findings of the study show that context and stability attributions were significant predictors of discounting and devaluing at the 0.05 level. Findings also show that external and internal attributions for failure were significantly correlated with discounting and devaluing respectively. Overall, the more students attribute the causes of their success and failure to causes that are external and unchangeable, the more likely they are to discount feedback than their counterparts who believe that such causes are changeable. This finding supports Major et al. (1998) who studied the role of psychological disengagement on coping with negative stereotypes. Findings show that African Americans were significantly more likely than European American students to attribute their performance to racial disadvantage.

The finding concerning the role of external attributions in disidentification supports findings by Verkuyten and Thijs (2004) who found out in their study of ethnic minority students in the Netherlands that disidentification occurred under the condition of perceived discrimination. Disidentification in that study was interpreted as a context-specific response to particular situations. Findings of this study may suggest that discounting due to external and stable attributions is context-specific and therefore shifting emphasis from stable and
internalised causes. The finding concerning internal attributions for failure among girls who attributed failure to the "weaker gender" perspective support Peterson and Barrett (1987) who found out that students who performed poorly were likely to blame aspects of their character for academic failure, whereas students who performed well tended to implicate factors outside themselves.

The finding that students were more likely to discount than devalue academic achievement supports the prediction that devaluing unlike discounting, is a stable attribute that is unlikely to temporarily fluctuate (Crocker & Major, 1989; Regner & Loose, 2006). Qualitative findings have shown that boys hold more ability attributions than girls, partly as a way to confirm their "manhood". Findings also corroborate quantitative findings that external attributions of luck are positively correlated with higher discounting (giving up). However, qualitative findings also indicate that repeated failure only leads to giving up depending on whether the teacher plays a robust motivating role or not. Put together, these findings support the disidentification hypothesis which holds that grades will of themselves not cause disidentification unless working through lowered academic self-esteem (Osborne, 1995; Steele, 1992).

Overall, these findings show that students interpret success and failure in ways that validate the domains on which self-worth is contingent. Qualitative findings showing that students avoid tests by feigning sickness confirm that they want to validate their self-worth by proving or demonstrating that failure is external to ability. Consequently, they approach these situations with self-
esteem goals - they want to prove that they have value and worth by succeeding, and they want to avoid invalidating their worth by failing – and if they fail, at least fail in a way that reflects less on ability. Performance in tests therefore becomes a statement about their worth. According to Roger's Self-theory of Personality Development, the immediate consequence of validating one's self-worth by success and failure in external conditions of worth is incongruence. This is because success is extrinsically induced and is short-term. Students consequently adopt goals that lead towards validating the self by passing tests and not learning (Ogbu, 2003).

4.3.5 Mediation of Academic Self-esteem on the Relationship between Gender, Type of School, Academic Achievement and Causal Attributions and Academic Disidentification

The final objective of this study was to find out the extent to which academic self-esteem mediates the relationship between gender, type of school, grades and causal attributions and academic disidentification. Each section tested the mediation model in four steps condensed into three regression equations (Baron & Kenny, 1986; Frazier et al., 2004; MacKinnon, 2008; MacKinnon et al., 2007). The findings of the supplementary hypotheses were then discussed.
a. Description of Relationships between Predictor Variables and Academic Self-esteem

In line with mediation analysis, relationships between variables were first identified. The correlations between all variables are shown in Table 4.31. None of the correlations were high enough to indicate multicollinearity.

Table 4.31

Correlations of main variables

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Gender</td>
<td>r</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sig.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. ToS</td>
<td>r</td>
<td>-196**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sig.</td>
<td>0.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Average</td>
<td>r</td>
<td>0.097*</td>
<td>-0.022</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sig.</td>
<td>0.40</td>
<td>0.645</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Locus</td>
<td>r</td>
<td>0.028</td>
<td>-0.099*</td>
<td>-0.032</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sig.</td>
<td>0.557</td>
<td>0.036</td>
<td>0.502</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Stability</td>
<td>r</td>
<td>-0.090</td>
<td>0.069</td>
<td>-123**</td>
<td>-132**</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sig.</td>
<td>0.058</td>
<td>0.143</td>
<td>0.009</td>
<td>0.005</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Disc</td>
<td>r</td>
<td>0.033</td>
<td>0.176**</td>
<td>-0.063</td>
<td>-0.330**</td>
<td>0.161**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sig.</td>
<td>0.489</td>
<td>0.000</td>
<td>0.185</td>
<td>0.000</td>
<td>0.001</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Dev</td>
<td>r</td>
<td>-136**</td>
<td>0.043</td>
<td>-1.55**</td>
<td>-262**</td>
<td>0.121*</td>
<td>0.246**</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig.</td>
<td>0.004</td>
<td>0.367</td>
<td>0.001</td>
<td>0.000</td>
<td>0.010</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>8. ASE</td>
<td>r</td>
<td>-0.006</td>
<td>-0.040</td>
<td>0.254**</td>
<td>0.188**</td>
<td>-0.187**</td>
<td>-159**</td>
<td>-170**</td>
</tr>
<tr>
<td></td>
<td>Sig.</td>
<td>0.901</td>
<td>0.403</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.001</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Note: ** = p < 0.01, * = p < 0.05, ToS = Type of School, Disc = Discounting, Dev = Devaluing, ASE = Academic Self-esteem

b. Hypothesis testing

To test for mediation in line with objective five, the following null hypothesis was formulated:
H05: Academic self-esteem does not significantly mediate the relationship between gender, type of school, academic achievement and causal attributions and academic disidentification of secondary school students.

In line with earlier analyses which failed to find gender to be significantly related to discounting, it was removed from mediation analyses involving discounting. Similarly, type of school showed no significant relationship with devaluing and was therefore removed from further mediation analyses.

Consequently, to achieve the main objective, eight supplementary null hypotheses were formulated:

H05.1: Academic self-esteem does not significantly mediate the relationship between type of school and discounting

H05.2: Academic self-esteem does not significantly mediate the relationship between gender and devaluing

H05.3: Academic self-esteem does not significantly mediate the relationship between academic achievement and discounting

H05.4: Academic self-esteem does not significantly mediate the relationship between academic achievement and devaluing

H05.5: Academic self-esteem does not significantly mediate the relationship between locus attributions and discounting

H05.6: Academic self-esteem does not significantly mediate the relationship between locus attributions and devaluing

H05.7: Academic self-esteem does not significantly mediate the relationship between stability attributions and discounting
\( H_{05.8} \): Academic self-esteem does not significantly mediate the relationship 
between stability attributions and devaluing

i. First Supplementary Null Hypothesis

\( H_{05.1} \): Academic self-esteem does not significantly mediate the relationship 
between type of school and discounting

In the first step, type of school was found to significantly predict discounting, 
\[ F(1, 447) = 14.37, \ p < .001 \]. However, when academic self-esteem was 
regressed on type of school, the regression equation failed to reach 
significance, \( F(1, 447) = 0.70, \ p = .403 \). The null hypothesis that academic 
self-esteem does not significantly mediate the relationship between type of 
school and discounting failed to be rejected and no further analyses were 
carried out.

ii. Second Supplementary Null Hypothesis

\( H_{05.2} \): Academic self-esteem does not significantly mediate the relationship 
between gender and devaluing.

In step one, gender was a significant predictor of devaluing, \( F(2, 446) = 4.24, \ p 
= .015 \). However, gender did not significantly predict academic self-esteem, 
\( F(1, 447) = 0.01, \ p = .901 \). The null hypothesis that academic self-esteem does 
not significantly mediate the relationship between gender and devaluing failed 
to be rejected and no further mediation analyses were done.
iii. Third Supplementary Null Hypothesis

$H_{05.3}$: Academic self-esteem does not significantly mediate the relationship between academic achievement and discounting

To test the extent to which academic self-esteem mediates the relationship between academic achievement and discounting, academic achievement was regressed on discounting in the first step. However, academic achievement did not significantly predict discounting at the 0.05 level, $F(1, 447) = 1.76, p = .185$. Evidence so far failed to reject the null hypothesis that academic self-esteem does not significantly mediate the relationship between academic achievement and discounting and no further mediation analyses were carried out.

iv. Fourth Supplementary Null Hypothesis

$H_{05.4}$: Academic self-esteem does not significantly mediate the relationship between academic achievement and devaluing.

A series of multiple regression analyses were conducted to test whether academic self-esteem mediates the relationship between grades and devaluing. In the first step, academic achievement significantly predicted devaluing, $F(1, 447) = 10.99, p = .001$ providing evidence of a relationship to be mediated. Academic achievement was found to be significantly negatively related to devaluing ($\beta = -0.58, SE = 0.17$). There was a statistically significant relationship between academic achievement and academic self-esteem, $F(1, 447) = 30.69, p < .001$. An increase in academic achievement is associated with an increase in academic self-esteem ($\beta = 2.27, SE = 0.41$). The relationship
between academic self-esteem and devaluing was statistically significant, \( F(1, 447) = 13.24, p < .001 \). An increase in academic self-esteem was associated with a reduction in devaluing. Further, the relationship between academic self-esteem and devaluing was statistically significant when controlling for academic achievement. Though the adjusted effect of academic achievement remained significant, \( F(2, 446) = 9.81, p < .001 \), the regression coefficient for academic achievement in Path \( c' \) had decreased (\( \beta = -0.45, SE = 0.18 \)) thus fulfilling the third condition for demonstrating mediation. The supplementary null hypothesis was therefore rejected. The results of the mediation analyses were presented in Table 4.32.

**Table 4.32**

*Summary of Regression Model of Mediation of Academic Self-esteem between Academic Achievement and Devaluing*

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardised coefficients</th>
<th>( \beta )</th>
<th>( SE )</th>
<th>( R^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analysis One: Grades on devaluing</td>
<td>-0.58**</td>
<td>0.17</td>
<td>0.02*</td>
<td></td>
</tr>
<tr>
<td>Analysis Two: Step 1: Grades on Devaluing</td>
<td>-0.45*</td>
<td>0.18</td>
<td>0.04*</td>
<td></td>
</tr>
<tr>
<td>Step 2: ASE on devaluing</td>
<td>-0.06*</td>
<td>0.02</td>
<td>0.04*</td>
<td></td>
</tr>
<tr>
<td>Analysis Three: Grades on ASE</td>
<td>2.27**</td>
<td>0.41</td>
<td>0.06**</td>
<td></td>
</tr>
</tbody>
</table>

*Note: * = \( p < .05 \), ** = \( p < .001 \)*

From Table 4.29, the estimate of the mediated effect was calculated as the product of \( ab = (2.27)(-0.06) = -0.14 \). The standard error of the mediated effect was found to be 0.05. To calculate the significance of the mediated effect, the value of \( ab \) was divided by its standard error and the value compared to the \( z \) value of the 95% confidence interval in a standard normal distribution (1.96).
The value derived was -2.64 indicating a significant mediated effect. Finally, the mediated effect was presented as a ratio of the total effect. The value found (0.23) suggests that academic self-esteem mediates almost a quarter of the total relationship between academic achievement and devaluing.

**v. Fifth Supplementary Null Hypothesis**

$H_{05.5}$: Academic self-esteem does not significantly mediate the relationship between locus attributions and discounting.

In the first step, locus attributions significantly predicted discounting, $F(1, 447) = 54.44, p < .001$ providing evidence of a significant relationship to be mediated. There was a statistically significant relationship between locus attributions and academic self-esteem, $F(1, 447) = 16.31, p < .001$. Higher internal attributions correspond to an increase in academic self-esteem. The relationship between academic self-esteem and discounting was statistically significant, $F(1, 447) = 11.52, p = .001$ when controlling for locus attributions. An increase in academic self-esteem was associated with a reduction in discounting. Though the adjusted effect of locus attributions remained statistically significant, $F(2, 446) = 29.91, p < .001$, there was a drop in the value of locus attributions ($\beta = -2.31, SE = 0.33, p < .001$). The supplementary hypothesis was therefore rejected. The findings were reported in Table 4.33.
Table 4.33

**Summary of Regression Model of Mediation of Academic Self-esteem between Locus and Discounting**

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardised coefficients</th>
<th>( \beta )</th>
<th>( SE )</th>
<th>( R^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analysis One</td>
<td></td>
<td>-2.46**</td>
<td>0.33</td>
<td>0.10**</td>
</tr>
<tr>
<td>Locus on discounting</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Analysis Two</td>
<td></td>
<td>-2.31**</td>
<td>0.33</td>
<td>0.11**</td>
</tr>
<tr>
<td>Locus on discounting</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ASE on discounting</td>
<td>-0.06</td>
<td>0.03</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Analysis Three</td>
<td></td>
<td>2.36**</td>
<td>0.58</td>
<td>0.03**</td>
</tr>
<tr>
<td>Locus on ASE</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note: ** = \( p < .001 \)*

The estimate of the mediated effect was found to be equal to the product of \( ab \) = (2.36)(-0.06) = -0.14. The standard error of the mediated effect was then computed (\( SE = 0.06 \)). By dividing \( ab \) by the standard error, a value of -1.79 was found, indicating an insignificant mediated effect.

Findings led to the conclusion that academic self-esteem partially and significantly mediated the relationship between locus attributions and discounting. To find out how much mediated effects account for in the total relationship between locus attributions and discounting, the relative magnitude was calculated (0.06). Findings suggest that academic self-esteem accounts for 6% of the total relationship between locus attributions and discounting feedback. This effect is however, insignificant.
vi. Sixth Supplementary Null Hypothesis

H$_{05.6}$: Academic self-esteem does not significantly mediate the relationship between locus attributions and devaluing.

In the first step, locus attributions significantly predicted devaluing, $F(1, 447) = 32.81$, $p < .001$. An increase in one's locus attributions led to a decrease in devaluing. Evidence for direct effects was given. Locus attributions significantly predicted variations in academic self-esteem $F(1, 447) = 2.35$, $p < .001$. The higher the student's locus attributions, the higher the academic self-esteem reported. The relationship between academic self-esteem and devaluing was also statistically significant when controlling for locus attributions, $F(2, 446) = 20.30$, $p < .001$. The adjusted effect of locus attributions remained statistically significant though the unstandardised regression coefficient associated with locus attributions decreased ($\beta = -1.26$, $SE = 0.24$, $p < .001$). This evidence led to the rejection of the hypothesis that academic self-esteem did not mediate the relationship between locus attributions and devaluing. The findings of the mediation analysis were presented in Table 4.34.

The estimate of the mediated effect was found to be equal to the product of $ab = (2.36)(-0.05) = -0.12$. The standard error of the mediated effect was calculated ($SE = 0.06$). The mediated effect was found to be significant when the $ab$ value was divided by its standard error (-2.13). The relative magnitude of mediated effects was computed and a value of 0.09 was found. Evidence therefore suggests that academic self-esteem mediates 9% of the total relationship between locus attributions and devaluing.
Table 4.34

Summary of Regression Model of Mediation of Academic Self-esteem between Locus and Devaluing

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardised coefficients</th>
<th>( \beta )</th>
<th>SE</th>
<th>( R^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analysis One</td>
<td>Locus on devaluing</td>
<td>-1.38**</td>
<td>0.24</td>
<td>0.06**</td>
</tr>
<tr>
<td>Analysis Two</td>
<td>Locus on devaluing</td>
<td>-1.26**</td>
<td>0.24</td>
<td>0.08**</td>
</tr>
<tr>
<td></td>
<td>ASE on devaluing</td>
<td>-0.05*</td>
<td>0.02</td>
<td></td>
</tr>
<tr>
<td>Analysis Three</td>
<td>Locus on ASE</td>
<td>2.36**</td>
<td>0.58</td>
<td>0.35**</td>
</tr>
</tbody>
</table>

Note: * = \( p < 0.05 \), ** = \( p < .001 \)

vii. Seventh Supplementary Null Hypothesis

\( H_{05.7} \): Academic self-esteem does not significantly mediate the relationship between stability attributions and discounting.

In the first step, stability attributions were regressed on discounting and the model was significant, \( F(1, 447) = 11.95, p = .001 \), therefore indicating a path to be mediated. An increase in stability attributions was associated with an increase in discounting. There was a statistically significant effect of stability attributions on academic self-esteem, \( F(1, 447) = 16.21, p < .001 \). The relationship between academic self-esteem and discounting was statistically significant when controlling for stability attributions, \( F(2, 446) = 10.04, p < .001 \). The adjusted effect of stability attributions retained significance though there was a reduction in the value of Path \( c' \) (\( \beta = 0.06, SE = 0.02, p = .004 \)).

The hypothesis that academic self-esteem does not mediate the relationship between stability attributions and discounting was therefore rejected. The findings of the mediation analyses were presented in Table 4.35.
Table 4.35

**Summary of Regression Model of Mediation of Academic Self-esteem**

between Stability Attributions and Discounting

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardised coefficients</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>β</td>
<td>SE</td>
</tr>
<tr>
<td>Analysis One</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stability on discounting</td>
<td>0.07*</td>
<td>0.02</td>
</tr>
<tr>
<td>Analysis Two</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stability on discounting</td>
<td>0.06*</td>
<td>0.02</td>
</tr>
<tr>
<td>ASE on discounting</td>
<td>-0.08</td>
<td>0.03</td>
</tr>
<tr>
<td>Analysis Three</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stability on ASE</td>
<td>-0.15**</td>
<td>0.04</td>
</tr>
</tbody>
</table>

*Note: * = p < .01, ** = p < .001

The value of the mediated effect was computed as the product of the corresponding $ab$ values, $(-0.15)(-0.08) = 0.012$. To determine the limits of mediation, the standard error of the mediated effect was calculated ($SE = 0.0006$). When the $ab$ value was divided by its standard error, the mediated effect of academic self-esteem on the relationship between stability attributions and discounting was found to be significant (2.17) when compared to a standard normal distribution (1.96). When the relative magnitude of mediated effects was computed, a value of 0.14 was found indicating that academic self-esteem mediates up to 14% of the total relationship between stability attributions and discounting.

xiii. Eighth Supplementary Null Hypothesis

$H_{0.5.8}$: Academic self-esteem does not significantly mediate the relationship between stability attributions and devaluing.
In the first step, stability attributions significantly predicted devaluing, $F(1, 447) = 6.68$, $p = .010$, confirming the presence of direct effects. Stability attributions were also found to significantly predict changes in academic self-esteem $F(1, 447) = 16.21$, $p < .001$. The relationship between academic self-esteem and devaluing was statistically significant, $F(2, 446) = 8.59$, $p < .001$ when controlling for stability attributions. The adjusted effect of stability attributions retained statistical significance though there was a reduction in the value of stability attributions in Path $c'$ ($\beta = 0.03$, $SE = 0.01$, $p = .050$). The hypothesis that academic self-esteem does not significantly mediate the relationship between stability attributions and devaluing was rejected. The findings of the mediation analyses were then presented in Table 4.36.

**Table 4.36**

**Summary of Regression Model of Mediation of Academic Self-Esteem between Stability Attributions and Devaluing**

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardised coefficients</th>
<th>$R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$\beta$</td>
<td>$SE$</td>
</tr>
<tr>
<td>Analysis One</td>
<td>Stability on devaluing</td>
<td>0.04*</td>
</tr>
<tr>
<td>Analysis Two</td>
<td>Stability on devaluing</td>
<td>0.03*</td>
</tr>
<tr>
<td></td>
<td>ASE on devaluing</td>
<td>-0.06</td>
</tr>
<tr>
<td>Analysis Three</td>
<td>Stability on ASE</td>
<td>-0.15**</td>
</tr>
</tbody>
</table>

*Note: * $= p < .05$, ** $= p < .001$

From Table 4.36, the estimate of the mediated effect was found to be equal to the product of $ab = (-0.15)(-0.06) = 0.009$. The standard error of the mediated effect was found to be 0.0038. When the $ab$ value was divided by its standard error, a value of 2.34 was found. Evidence therefore suggests that the mediated
effect of academic self-esteem on the relationship between stability attributions and devaluing was significant. The relative magnitude of the mediated effect was found to be equal to 0.25, indicating that academic self-esteem mediates up to a quarter of the total relationship between stability attributions and devaluing.

d. Discussion of Findings

In the first supplementary hypothesis, academic self-esteem did not significantly mediate the relationship between type of school and discounting. This finding suggests that type of school affects discounting on its own and not through academic self-esteem. This is an interesting finding since it may suggest that students are likely to discount performance feedback on the basis of type of school. Quantitative and qualitative analyses suggest that students in private schools discount more than their counterparts in other schools. It is therefore likely that private schools are a threatening environment which wholly accounts for discounting. The finding supports Inzlicht and Ben-Zeev (2000) who found that women's performance in mathematics dropped when they were evaluated with males in the same group.

Qualitative findings show that group self-esteem can influence the extent to which learners invest in education. Findings show that students from schools that perform well are more likely to have higher group and personal esteem than their counterparts from poor performing schools. It is important to remember that private schools reported the lowest academic self-esteem.
In the second supplementary hypothesis, academic self-esteem did not significantly mediate the relationship between gender and devaluing. This finding supports Stephan et al. (2010) who found no relationship between gender and devaluing. However, the findings contradict Cokley and Moore (2007) who found significant gender differences in devaluing academic success. In the study, gender was significantly related to GPA ($\beta = 0.18$, $p < .01$). Men devalued academic outcomes more than women. Though gender was significantly related to devaluing in this study, its relationship with devaluing was not mediated by academic self-esteem. It therefore suggests that the link between a student's gender and the need to self-protect by devaluing academic achievement is elicited by gender itself and not the resulting low academic self-esteem, thus, gender has a weak relationship with academic self-esteem. This finding contradicts qualitative findings which appear to suggest that gender has a link with academic self-esteem with more girls than boys reported to be "less able".

The hypothesis that academic self-esteem does not significantly mediate the relationship between grades and discounting was not rejected. Findings of this study partially contradict Regner and Loose (2006) who found out that academic self-esteem mediated the influence of grades on both discounting and devaluing. The findings also contradict Stephan et al. (2010) who found that grades significantly predicted discounting through perceived competence. However, this study and previous studies find consensus in the finding that grades negatively predict discounting.
Academic self-esteem was found to significantly mediate the relationship between grades and devaluing in the fourth supplementary hypothesis. This finding supports Regner and Loose (2006) who found that academic self-esteem mediated the influence of grades on devaluing. The finding also partially corroborates the findings of Verkuyten and Thijs (2004) who found a significant relationship between perceived educational performance and global self-worth. The inference is that since academic self-esteem is the trait linked closest to global self-worth for students, perceived performance would influence effort investment to maintain self-worth. Taken together, these findings lend support to the disidentification hypothesis where grades lead to disidentification through the decrease in academic self-esteem that follows failure (Osborne, 1995). Qualitative findings confirmed that repeated failure is associated with giving up. However, it was also found out that this was mediated by teachers' comments following failure. It is therefore likely that devaluing can be controlled by the type of feedback students receive. Qualitative findings therefore support the findings of Skipper and Douglas (2011) who found out that praise following feedback determined persistence.

In the fifth supplementary hypothesis, academic self-esteem significantly mediated the relationship between locus attributions and discounting. The findings parallel Major and Schmader (1998) who found that stigmatised groups were able to protect self-esteem by attributing negative feedback to prejudice. These findings also support assertions by other studies (Crocker et al., 1991) that have found a link between self-esteem, disidentification and
perceptions of outcomes outside one's control. The findings indirectly support other studies (Beaton et al., 2014; Tougas et al., 2005) that have found a negative relation between discounting and self-esteem indicating that self-esteem mediated the relationship between feelings of personal relative deprivation and discounting.

Academic self-esteem significantly mediated the relationship between locus attributions and devaluing. These findings offer support to previous studies whose findings show that learners disengage their self-esteem from outcomes when they perceive them as beyond their control (Crocker & Major, 1989; Major & Schmader, 1998). The findings also corroborate the findings of Verkuyten and Thijs (2004) who found out that perceived discrimination led students from ethnic minorities to psychologically disidentify from the academic domain. This was achieved by attributing failure to beliefs about existing discrimination at school and society and thereby detaching their self-esteem from the domain of contingent worth. Previous qualitative analysis in this study on attributions showed that many students held self-serving biases. The implication is that academic self-esteem reaffirmed students' belief that they are masters of their outcomes. This is also explained by qualitative findings which show that social support in the form of teachers' encouragement was negatively related to giving up.

Findings of the seventh and eighth supplementary hypotheses show a pattern of positive relationships in the mediation of academic self-esteem in the
relationship between stability attributions and discounting and devaluing. Findings of both hypotheses show that academic self-esteem significantly mediates the relationship between stability attributions and discounting and devaluing. Although the overall effect of academic self-esteem was to reduce discounting and devaluing, these particular mediation paths had contradictory effects. Findings suggest that academic self-esteem mediated the relationship between stability attributions and discounting and devaluing in two ways. First, stability attributions led to an increase in academic self-esteem which led to a reduction in discounting and devaluing. In the second pathway, discounting and devaluing actually increased because learners held stable attributions for success and could not be affected by increased academic self-esteem.

These findings seem to fit in with the work of Carol Dweck and her colleagues (Dweck, 1999; Dweck & Leggett, 1988; Elliott & Dweck, 1988, as cited in Elliot & Dweck, 2005) who have shown that people differ in the way they explain ability – as fixed entity or incremental. These findings suggest that for fixed entity students, failure leads students towards more stable attributions for failure and are more likely to discount and devalue irrespective of levels of academic self-esteem. To such students, failure means lack of ability which motivates strategies to self-protect. For incremental entity students, academic self-esteem is likely to reduce the effect of stability attributions and hence result in reduced discounting and devaluing. Qualitative findings which link repeated failure with more stable attributions for failure seem to support this assertion.
CHAPTER FIVE
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction
This chapter is divided into four sections. The first section presents a summary of the major findings. The second part of this chapter deals with the implications of the study while in the third section, conclusions of the study are presented. In the final section, recommendations for policy and research are presented.

5.2 Summary
This study sought to establish the extent to which gender and school type, academic achievement and attributions predict academic disidentification. Further, the study sought to establish the extent to which academic self-esteem mediated the relationships. Academic disidentification was defined and measured by discounting and devaluing. The study was conducted on a sample of 449 students, 206 boys and 243 girls and 11 teachers (7 female and 4 male) from 12 schools, one national, three private and eight sub-county schools in Mvita sub-county, Mombasa County, Kenya.

In line with the first objective, the study found out that discounting and devaluing varied by gender. Descriptive findings showed that more female students discounted feedback while more male students devalued academic achievement. Private schools had the highest levels of discounting and
devaluing. Two-way ANOVA showed main effects and interactions between gender and type of school in predicting academic disidentification. Female students in private schools reported significantly higher discounting. For devaluing, a significant main effect of gender was found with male students reporting significantly higher devaluing than their female counterparts. There was no significant main effect of type of school on devaluing. Qualitative analysis linked higher discounting among female students to culture that denies them an opportunity for academic advancement.

The second objective of the study sought to identify differences in academic self-esteem between male and female students in secondary schools. Descriptive findings indicated that almost equal proportions of students reported low and high academic self-esteem respectively. More female students reported low academic self-esteem. Comparisons of proportions within each gender show equal numbers of male and female students reported high academic self-esteem. Qualitative analysis indicated lower academic self-esteem among female students and explained it in terms of girls not finding any link between current academic achievement and future outcomes. Findings also revealed a relationship between academic self-esteem and academic disidentification. Most of the students who reported high academic self-esteem also reported low discounting and devaluing. However, a contradictory finding emerged; a number of students who reported high academic self-esteem also reported high discounting and devaluing.
Two-way ANOVA found significant main and interaction effects of gender and type of school on academic self-esteem with female students in private schools having significantly lower academic self-esteem. Academic self-esteem was also found to vary as a function of academic performance. One-way ANOVA also showed that poor academic performance was related to low academic self-esteem. Qualitative analysis showed that more male than female students defined their self-worth using grades. Additionally, affective reactions to grades were found to explain differences in academic self-esteem.

The third objective of this study was to establish the extent to which academic achievement in the form of scores predicted academic disidentification. Descriptive findings indicated that over two thirds of students sampled posted average academic achievement over the course of three consecutive terms. More female students showed consistently high academic achievement while more male students had average achievement. As expected, majority of students from the national school belonged to the high achievement group. Results of regression analyses showed academic achievement to significantly predict devaluing but not discounting. Regarding predictive value, academic achievement predicted devaluing more than discounting. One-way ANOVA showed no significant differences in discounting due to academic performance. However, statistically significant differences were found in means of devaluing between poor and high academic achievers but not between average and high achievers. Poor academic achievement was thus related to higher devaluing.
Qualitative data showed that female students are always at a cross roads when in evaluative situations. On the one hand, education is a valued domain in society, and on the other hand, they are not allowed to pursue higher education. While qualitative analysis confirmed that more female than male students would give up in the context of repeated failure, teachers' comments accompanying scores in tests were found to determine whether students would persist or give up.

The fourth objective of the study was to find out the extent to which attribution orientations predict academic disidentification. Descriptive findings showed that more female students had higher ability attributions and higher context and luck attributions. Linear regression results indicate that as a single model, ability, effort, context and luck significantly predicted discounting and devaluing. However, effort and luck were insignificant predictors of discounting. Additionally, while effort and ability were negatively related to discounting and devaluing, context and luck were positively related.

Stable attributions significantly positively predicted discounting and devaluing, while unstable attributions negatively and insignificantly predicted discounting. Unstable attributions also significantly negatively predicted devaluing. Internal attributions for success and external attributions for failure significantly predicted discounting negatively and positively respectively. External attributions for success and internal attributions for failure did not significantly predict discounting. Finally, internal attributions for success and external
attributions for failure significantly predicted devaluing negatively and positively respectively but external attributions for success and internal attributions for failure did not.

Qualitative data showed that in the context of repeated failure, more female than male students held stable attributions for failure and hence gave up faster. Qualitative findings also established that students held self-serving attributions. While most attributed success to internal factors, almost a third of the sample attributed failure to internal factors. Findings show that failure was always due to teachers' poor marking or bad luck. Additionally, these findings show gender differences in attributions for success and failure, each with implications for motivation in the context of repeated failure. While male students attributed failure to not having tried enough, most female students attributed it externally to the belief that females are the weaker sex.

The fifth objective of the study sought to find out the extent to which academic self-esteem mediated the relationship between gender, type of school, academic achievement and attributions and academic disidentification. Academic self-esteem partially and significantly mediated almost a quarter of the relationship between academic achievement and devaluing. Significant partial mediation of academic self-esteem was also found for locus attributions on both discounting and devaluing. Finally, academic self-esteem partially mediated the relationship between stability attributions and both discounting and devaluing.
5.3 Conclusions

This study addresses gaps in the work on academic disidentification among secondary school students. Drawing from Martin Covington's Self-worth Theory and Carl Rogers' Self Theory of Personality Development, and on the disidentification hypothesis, the study takes a step towards developing an understanding of academic disidentification among secondary school students in Kenya.

Findings on the extent to which type of school predicts academic disidentification point to the role of specific school environments in the prediction of disidentification. Findings show that female students from private schools consistently reported lower academic self-esteem and higher levels of discounting. The findings lead to the conclusion that some school situations are more likely to promote disidentification than others. It may be important to note that male students in private schools and other students in sub-county schools manage to protect themselves from low academic self-esteem and disidentification despite low achievement while female students in private co-educational schools disidentify.

Results of this study indicate that a significant positive relationship exists between academic achievement and academic self-esteem, and consequently with discounting and devaluing, thus highlighting the need for teachers to understand the influence of feedback on students' perceptions of competence. Findings seem to suggest that school curricula and evaluation regimes should
work towards striking a balance between criterion and norm-referenced performance feedback so that all students' accomplishments can be catered for.

Findings also show a positive relationship between both stable attributions and external attributions for failure significantly predict both discounting and devaluing. It can therefore be concluded that students holding such attributions are more likely to disidentify. Finally, findings found that academic self-esteem mediated the relationship between academic achievement, causal attributions and academic disidentification. This leads to the conclusion that students value the academic domain.

5.4 Recommendations

Findings of the study led to the following recommendations for policy and research.

5.4.1 Policy Recommendations

i. It is hoped that these results will inform interventions designed to increase the academic achievement of students in secondary schools, chief among them being mentoring programs and educational guidance.

ii. Female students in private schools reported significantly lower academic self-esteem and discounting. Policy at all levels should be geared towards self-esteem training for female students.

iii. The Kenya Institute of Curriculum Development under the Ministry of Education should strive to develop alternative curricula that strike a
balance between criterion and norm-referenced evaluation. This is keeping in step with the fact that the domains upon which individuals anchor their sense of self-worth are diverse.

iv. Though the study did not set out to address the issue of single-sex vis-a-vis coeducational schools, it may be likely that single-sex institutions can minimise gender stereotypes and bolster female students' attitudes towards education. The finding that female students in private coeducational schools had lowest academic self-esteem and higher discounting than male students in the same environment may suggest that female students can benefit from being in single-sex schools.

5.4.2 Recommendations for Further Research

i. Future studies could adopt experimental methods to study academic disidentification. Additionally, research could also adopt longitudinal designs where changes in academic disidentification would be tracked over time among a cohort of students. Both approaches would help to address the issue of causality among variables.

ii. Although this study did answer some questions concerning discounting and devaluing among secondary school students, it did not establish why female students from private schools are so prone to underachievement and low academic self-esteem and ultimately discounting and devaluing whereas other female students in sub-county and national schools are not. Future studies could address that issue.
iii. It is likely that some students do not base their self-esteem solely on perceived competence in the academic domain. Future studies may be interested to know what motivates such students in school when faced with repeated failure and ultimately what keeps them in school.

iv. Though findings have shown that self-evaluation is socially induced, this study concerned itself with individual reactions to failure and inappropriate attributions. Findings seem to indicate that disidentification can become a group response. Future research may examine levels of disidentification among students in communities that describe themselves as 'marginalised'.

v. Qualitative findings showed that students do not fully value the importance of current academic pursuit for future outcomes. Future studies should closely examine the value of education in the lives of students from the students' perspective.

vi. Though a mediational model was adopted in this study, it remained correlational in nature and therefore causality cannot be implied. Further research is needed to replicate these findings in other geographical and cultural contexts.
REFERENCES


Lefcourt, H. M., von Baeyer, C. L., Ware, E. E., & Cox, D. J. (1979). The multidimensional-multiattributitional causality scale: The development of


Mombasa County Education Office (2013). KCSE results analysis.


Regner, I., & Loose, F. (2006). Relationship of sociocultural factors and academic self-esteem to school grades and school disengagement in


APPENDICES

Appendix A

Consent to Participate in the Study

The purpose of this study is to find out the extent to which gender, type of school, grades and causal attributions contribute to academic disidentification and the extent to which academic self-esteem mediates the relationships. The findings will assist towards explaining students' lack of motivation and interest in school. The researcher will use this information for the purposes of this study only.

I request you to assist in achieving this goal. All information given will be treated with utmost confidentiality.

Thanking you in advance.

Habil Otanga
PhD Student, Kenyatta University

Participant:
Having understood that there is no risk involved in my participation, I give consent to participate.

School:

Admission Number:

Signature:
Appendix B

Students' Questionnaire

Instructions: Kindly do not indicate your name anywhere on the paper.

a. Demographic data

1. Gender: (Tick one)

   Female [    ] Male [   ]

2. Write the name of your school: ..................................

3. Write your admission number: ..................................

b. State Self-esteem Scale (Performance sub-scale)

This is a questionnaire designed to measure what you are thinking at this moment. There is no right answer for any statement. The best answer is what you feel is true of yourself at this moment. Be sure to answer all of the items, even if you are not certain of the best answer.

Using the following scale, place a number in the box to the right of the statement that indicates what is true for you at this moment:

1 = Strongly disagree   2 = Disagree   3 = Not sure   4 = Agree   5 = Strongly agree

1. I feel confident about my abilities [    ]

2. I feel frustrated or disturbed about my performance [    ]

3. I feel that I am having trouble understanding things I read [    ]
4. I feel smart as others [ ]

5. I feel confident that I understand things in class [ ]

6. I feel that I have less academic ability right now than others [ ]

7. I feel like I am not doing well in class [ ]

c. Achievement subscale of The Multidimensional-Multiattributio nal Causality Scale

Using the following scale, indicate the number corresponding to your response in the box provided. Kindly answer all the items.

1 = Strongly disagree 2 = Disagree 3 = Not sure 4 = Agree 5 = Strongly agree

Ability

The most important ingredient in getting good grades is my academic ability. [ ]

I feel that my good grades reflect directly on my academic ability. [ ]

When I get good grades, it is because of my academic competence. [ ]

If I were to receive low marks it would cause me to question my academic ability. [ ]

If I were to fail an exam it would probably be because I lacked skill in that area. [ ]

If I were to get poor grades I would assume that I lacked ability to succeed in those courses [ ]
Effort

In my case, the good grades I receive are always the direct result of my efforts.

Whenever I receive good grades, it is always because I have studied hard for that course.

I can overcome all obstacles in the path of academic success if I work hard enough.

When I receive a poor grade, I usually feel that the main reason is that I haven't studied enough for that course.

When I fail to do as well as expected in school, it is often due to a lack of effort on my part.

Poor grades inform me that I haven't worked hard enough.

Context

Some of the times that I have gotten a good grade in a course, it was due to the teacher's marking.

Some of my good grades may simply reflect that the exam was easy.

Sometimes I get good grades only because the course material was easy to learn.

In my experience, once a teacher believes that you are a poor student, you get poor grades.

Often my poorer grades are obtained in courses that the teacher has failed to make interesting.

Some low grades I've received seem to me to reflect the fact that some teachers are just stingy with marks.
Luck

Sometimes my success on exams depends on some luck.  

I feel that some of my good grades depend to a considerable extent on chance factors, such as having what I read coming in the exam.  

Sometimes I feel that I have to consider myself lucky for the good grades I get.  

Some of my lower grades have seemed to be partially due to bad luck.  

My academic low points sometimes make me think I was just unlucky.  

Some of my bad grades may have been a function of bad luck, being in the wrong class at the wrong time.  

d. Intellectual Engagement Inventory

Using the following scale, indicate the number corresponding to your response in the box provided. Kindly answer all the items.

1 = Strongly disagree 2 = Disagree 3 = Not sure 4 = Agree 5 = Strongly agree

Devaluing

1. Being good at academics is an important part of whom I am  

2. I always feel good about myself when I do well on an academic test  

3. Academic success is not very valuable to me  

4. It usually doesn’t matter to me how I do in school
Discounting

5. I feel that school examinations are fair tests of my abilities

6. In general, I feel that school examinations are a good measure of my intelligence

7. Most examinations do not really measure what they are supposed to

8. I feel that school examinations are definitely biased against me

Thanks for your participation
Appendix C

Semi-structured Interview Schedule for Class Teachers

Section I: Teachers’ background

a. Years of teaching in secondary school

b. Share your personal experience of being a class teacher in Form Three with regard to how motivated your students are.

Section II: Portrait of disengaged students

Share the frequency of the following learner behaviours in your class:

a. Learners who have low school commitment and indifference to academic work

b. Learners who avoid participating in class discussions

c. Learners who get bored in class, who view school attendance as a nuisance and resent assignments

d. Learners who are apathetic or defeatist in the face of challenge

e. Absenteeism and truancy

Section III: Gender and school type

a. Compare the characteristics mentioned in Section II by students’ gender and type of school you have worked in the past

b. Share your experiences on students' self-esteem in relation to where they attend school.

Section IV: Academic self-esteem

a. What is the extent to which your students find academic achievement important?
b. What are some of the factors that determine your students’ feelings of efficacy in school?

**Section V: Grades and disengagement**

a. What is the average mark for admission into school at Form One?

b. What is the frequency of tests in a term?

c. Describe your students' attitude towards tests?

d. What is the method of giving feedback – length of marking scripts, place of giving back scripts and comments on scripts?

e. How would you describe students' reactions to test results?

f. Are there any rewards and punishment after results?

g. In your experience, is there a link between student's current grade and grade in next test?

**Section VI: Causal attributions**

a. Classify students' perceptions of performance based on the four attribution orientations of ability, effort, luck and task difficulty

b. Relate each attribution orientation with students' efficacious feelings after feedback is given

c. Relate each attribution orientation with learners' motivation

**Thanks for your participation**
Appendix D

Research Authorisation

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

NACOSTI/P/14/3930/3251

Habil Ferd Otanga
Kenyatta University
P.O. Box 43844-00100
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on "Predictors of academic disidentification among form three secondary school students in Mtwapa Sub County, Mombasa County, Kenya," I am pleased to inform you that you have been authorized to undertake research in Mombasa County for a period ending 31st December, 2014.

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

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

DR. S. K. LANGAT, OGW
FOR: SECRETARY/CEO

Copy to:

The County Commissioner
The County Director of Education
Mombasa County.
Appendix E

Research Clearance Permit

CONDITIONS

1. You must report to the County Commissioner and the County Education Officer of the area before embarking on your research. Failure to do so may lead to the cancellation of your permit.
2. Government Officers will not be interviewed without prior appointment.
3. No questionnaire will be used unless it has been approved.
4. Excavation, filming and collection of biological specimens are subject to further permission from the relevant Government Ministries.
5. You are required to submit at least two (2) hard copies and one (1) soft copy of your final report.
6. The Government of Kenya reserves the right to modify the conditions of this permit including its cancellation without notice.

RESEARCH CLEARANCE PERMIT

Serial No.: 3349

CONDITIONS: see back page

THIS IS TO CERTIFY THAT:

MR. HABIL FERD OTANGA
of KENYATTA UNIVERSITY, G-08100
MOMBASA, has been permitted to conduct research in Mombasa County on the topic: PREDICTORS OF ACADEMIC DISIDENTIFICATION AMONG FORM THREE SECONDARY SCHOOL STUDENTS IN MVITA SUB COUNTY, MOMBASA COUNTY, KENYA

for the period ending: 31st December, 2014

Signature

Applicant's

Permit No.: NACOSTI/P/14/3930/3251
Date Of issue: 25th September, 2014
Fee Received: Ksh 2,000

Secretary

National Commission for Science, Technology & Innovation
Appendix F

Authority to Conduct Research in Mombasa County

Habil Ferd Otanga is a post graduate student at Kenyatta University. He is carrying out a research titled “Predictors of academic disidentification among Form three secondary school students in Mvita Sub County, Mombasa County, Kenya”, for a period ending 31st December, 2014.

He has been authorized to visit schools and collect data.
Appendix G

Mombasa County Map