

## Relationship between Achievement Goals and Academic Achievement of Form Three Students in Nairobi County, Kenya

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### Abstract

The purpose of this study was to examine the relationship between achievement goals and academic achievement of form three students in public secondary schools in Nairobi County, Kenya. The trichotomous achievement goal framework and the self-worth theory of achievement motivation formed the theoretical framework. The study adopted a correlational research design to establish the relationship between the variables. The study sample consisted of 602 students selected from 13 schools using purposive, stratified, proportionate and simple random sampling procedures. Pearson Product Moment Correlation Coefficient ( $r$ ) was used to analyse data. The results obtained from correlation analysis showed that mastery goals ( $r(595) = .17, p < .01$ ) and performance-approach ( $r(595) = .18, p < .05$ ) goals were both positively correlated to academic achievement. Performance-avoidance goals, on the other hand, were negatively correlated with academic achievement ( $r(595) = -.15, p < .05$ ). The findings supported the two goals perspective that recognises the benefits of both mastery and performance goals. It showed that mastery goals only may not be helpful to all students. Based on the findings, the researcher suggests that in order to attain better academic achievement, it is important for students to adopt achievement goals that focus on developing as well as demonstrating competence. Mastery goals only may not be helpful in every context or for all students. The findings may contribute to an increase in the knowledge base for teachers who may see the need to implement appropriate classroom practices that can encourage the adoption of mastery and performance-approach goals. This, in turn, may enable students to improve academic achievement and reach their full potential.

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**Keywords:** academic achievement; achievement goals; mastery goals; performance approach goals; performance avoidance goals; self-worth

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### INTRODUCTION

As students progress to secondary school, they begin to experience greater competition and performance evaluation. They get exposed to various learning experiences. They learn new skills, are examined, graded and ranked according to their academic performance in comparison to other students. In the process, they set certain academic goals which may either focus their attention on the adoption of goals to excel in examinations, to perform better than others or to understand a concept. Academic goals guide students' behaviour in a school setting by helping students to structure their time so that they can focus on what is important to them. Academic performance, which is measured by examination results, therefore becomes one of the major goals of students as well as teachers in schools (Elliot, 1999). According to Anderman and Patrick (2012), the achievement goals that are adopted by students in school may have an influence on their academic achievement. For some their sense of worth depends on the ability to compete and therefore the grades they score assume more meaning. Some student may begin to interpret good

grades to mean worthiness while poor grades would mean worthlessness. Their sense of self-worth begins to depend heavily on the ability to achieve competently (Otanga, 2016).

Two qualitatively different achievement goal constructs emerge when individual students are involved in academic goal-setting activities. These constructs are "mastery" and "performance" goals. Students who are performance goal-oriented tend to focus on outperforming others, on demonstrating behaviour that would lead to public recognition or praise and prefer easy tasks (Anderman and Patrick, 2012; Phan, 2013).

There are two types of performance goal orientations, performance-approach and performance-avoidance. Students, who adopt performance-approach goals, will tend to emphasis on outperforming others and demonstrating behaviour that would lead to public recognition or praise. They will do whatever it takes to outperform others in a class (Grant & Dweck, 2003). Adoption of performance goals may subject them to

feelings of humiliation, especially, when they are ranked below their peers in academic achievement. A few of these students may end up scoring high academic grades without content mastery. Others may even cheat in examinations to protect their self-worth and demonstrate to teachers, parents, and classmates that they are smarter than others. Others may end up performing poorly and therefore fail to reach their full potential and to become useful members of the society. There are those who may embrace performance-avoidance goals which are grounded in the desire to avoid appearing incompetent to others. As a result, their performance goals may undermine their academic performance.

On the other hand, mastery-oriented students tend to develop competence by prioritising on learning, improvement and comprehension. Such students adopt strategies that help them improve their academic achievement (Grant & Dweck, 2003). There are mixed findings on whether or not the adoption of mastery goals leads to improvement in academic achievement (Bücker et al., 2018). This study examined the link between mastery goals and academic achievement.

#### **Statement of the Problem**

Academic achievement is what usually determines the transition to the next educational level and career prospects of many candidates in many parts of the world including Kenya. Candidates who record poor academic performance by failing to obtain the required minimum grade C and above in KCSE, may, therefore, sometimes fail to reach their full potential and become useful members of the society. Several studies in Kenya have investigated poor academic performance in KCSE with a view to identifying the success factors in academic achievement. Despite the various studies, the problem of poor performance by some students in KCSE persists. There was a need, therefore, to investigate other possible factors that may be linked to academic achievement.

Studies conducted outside Kenya have reported a link between achievement goals and academic achievement. These psychological constructs have been reported to influence the academic achievement of students in developed countries (Hornstra, Majoor & Peetsma, 2017; Mouratidis et al., 2018; Phan, 2013). Studies in Kenya that have examined the relationship between, achievement goals and academic achievement are scarce. This research, therefore, examined the relationship between achievement goals and academic achievement of form three students in Nairobi County.

#### **The objective of the Study/Research Hypotheses**

The objective of the study was to examine the relationship between students' achievement goals and academic achievement.

H<sub>a1</sub> There is a significant relationship between personal achievement goals and academic achievement.

#### **Theoretical Framework**

This study was based on two theories: Elliot and Church's trichotomous achievement goal framework and Covington's self-worth theory of achievement motivation.

#### **Trichotomous Achievement Goal Framework (Elliot & Church, 1997)**

This study was based on a three-dimensional framework of achievement goals by Elliot and Church (1997). The theory defines achievement goals as the purpose for which an individual engages in an achievement task. Achievement goal theory focuses on what motivates individuals to achieve in an achievement setting, for instance, why learners engage in academic work (Elliot, 1999; Elliot & Dweck, 2005).

In the three-dimensional framework of achievement goals model by Elliot and Church (1997), performance goal component is split into approach and avoidance orientations, and as a result, three sets of achievement goals are depicted. They comprise mastery, performance-approach and performance-avoidance goals. Mastery-oriented students tend to emphasise on the development of competence, learning, and understanding of tasks. They perceive themselves as successful when they try to work hard, improve their skills, or gain comprehension. Competence is defined by self-referenced standards. Mastery-oriented students evaluate their competencies and progress based on past performance or as compared with the requirements of the task itself (Elliot & Church, 1997).

In performance-approach goals, the purpose of the behaviour is to demonstrate one's competence. When students pursue performance-approach goals, their concern is to compare favourably with others and to prove ability by outperforming others. Use of social comparison standards and public recognition when one has outperformed others are very important for someone who holds a performance-approach goal. Learning is regarded only as a means of achieving the desired goal. Performance-avoidance goals focus on avoiding the demonstration of one's incompetence. It involves striving to avoid negative possibilities. When students pursue performance-avoidance goals, their concern is to avoid being judged as incapable (Elliot & Church, 1997).

The three-dimensional achievement goal framework provides a contrast between performance-approach and avoidance but depicts mastery as 'whole approach goal orientation'. Mastery and performance-approach goals are considered as

approach orientations because they both involve striving to achieve positive outcomes. The goals differ in meaning based on how competence is defined. Whereas the focus of mastery goals is on development, performance-approach entails demonstration of competence. The performance-avoidance goal, on the other hand, is posited as a maladaptive motivation orientation whose focus is on avoidance of demonstration of lack of ability (Elliot & Church, 1997; Middleton & Midgley, 1997).

Concerning the current study, the theory provided a basis for studying the path through which achievement goals predict academic achievement. For instance, achievement settings that are designed to stimulate challenges, together with mastery and performance-approach goals may create a desire for achievement.

The validity and usefulness of the trichotomous model of achievement goals have been reported for middle school and college level students in North America. The current study opted to use the same framework for secondary school students in Kenya. The current research, therefore, adopted the achievement model to establish the relationship between achievement goals and academic performance.

#### **Covington's Self-Worth Theory of Achievement Motivation (1984)**

The performance goal component of the trichotomous model of achievement goals was reinforced by Covington's Self-Worth Theory of Achievement Motivation. Covington (1984) developed a theory that proposes that one's sense of worth depends heavily on one's ability to achieve competitively. The theory suggests that self-worth protective individuals tend to worry about how they are evaluated by others and the impression they present to the world about their competence (Covington, 1998). The theory proposes that the achievement goals students adopt are a reflection of their effort to maintain a sense of worth in a learning environment that values competency. This is because they live in a society where individuals are generally considered to be only as worthy as their ability to achieve (Covington, 1998). Individuals who are performance-oriented tend to be competitive and most successful when they outperform others. From a self-protection point of view, they are likely to be vulnerable in achievement situations where there may be a likelihood of failure.

Mastery-oriented individuals, on the other hand, are more concerned with the task itself than with outperforming others. Success to them is primarily due to effort rather than ability. This theory was chosen to provide a basis for studying the path through which academic achievement depends closely on an interaction between the kinds of

personal achievement goals students bring to the classroom and the prevailing school psychological environment.

The two theories were used to examine the predictive value of achievement goal variable on the academic achievement of form three students. The rationale for adopting both the achievement goal theory and self-worth theory of motivation is because both theories are concerned about why individuals are motivated towards certain behaviour. Whereas achievement goal theory is concerned with what individuals are motivated to do, to develop mastery or demonstrate performance, the self-worth theory is concerned with maintaining self-worth.

Research on the link between achievement goal and academic achievement is scarce in Kenya and particularly among adolescent students in form three. This was, therefore, an area which required further research. This research, therefore, examined the link between achievement goals and academic achievement from the perspective of both achievement goal theory and self-worth theory of motivation. A review of the literature has revealed that not many studies that have combined both theories in a single study to examine students' academic achievement.

#### **Achievement Goals and Academic Achievement**

Was (2013) employed a path model to establish relations among predictors of the university students' academic achievement. The study sample consisted of 125 undergraduate students who were enrolled in an Educational Psychology course at a Midwestern university, United States of America. The results from the correlational analysis revealed a significant positive correlation between mastery goals and academic achievement. Results from hierarchical regression analysis equally showed that mastery goals had a unique contribution in predicting academic achievement. The path analysis also confirmed that mastery goals had significant direct effects on academic achievement.

On the other hand, a correlational analysis showed no significant relationship between performance goals and academic achievement. Regression analysis confirmed no significant contribution of performance goal in predicting academic achievement. The path analysis also showed an absence of performance goals from the path model. This finding contradicted other previous findings. Was (2013) explained the contradiction by suggesting it was possible that for this particular class performance goals were not good goals to adapt. The finding by Was (2013) makes it necessary to re-examine the design and establish whether performance goals have significant correlations with an academic performance by using a sample from high school students.

A study by Hall, M. Hanna, Hanna, and Hall (2015) examined the relationship between goal orientation and academic performance among university students in the UK. The study used a census approach. The student population included all 529 students enrolled in a pharmacy programme. Data related to students' grades were obtained from the university students' information system. Mean score for each goal orientation was calculated. The respondents were placed into two academic groups based on a mean weighted mark of  $\geq 70\%$ . 'Low' performers were students who scored  $\leq 70\%$ , whereas, 'high' performers scored  $\geq 70\%$ . The relationship between goal orientation and academic performance was investigated using linear regression model. Results indicated that there were 19.4% of the students in the 'high' group category. The 'low' group category had 80.6% of the students. The highest mean score was achieved for mastery-approach goals, and the lowest was for work-avoidance orientation.

The results from linear regression analysis indicated that only mastery-avoidance and work-avoidance were statistically significant predictors of academic achievement. Mastery-approach, performance-approach, performance-avoidance were not significant predictors of academic achievement. The coefficients for mastery-avoidance and work-avoidance were -0.35134 and 0.25247 respectively which implied that avoidance-approach was counterproductive to academic performance.

Given that the study was conducted in one pharmacy school in the UK, the results may not be generalised to other areas of the world including Kenya. Although these results have added knowledge to the field of achievement motivation by pointing out the role of achievement in the academic performance of undergraduate pharmacy students, what remained unanswered was whether or not similar findings could be observed among secondary school population.

Dekker et al. (2016) investigated whether or not academic achievement was predicted by goal orientation. The sample consisted of 735 adolescents aged between 10 to 19 years, drawn from four secondary schools in South-East of Netherlands. The study used a methodology that allowed easy classification of students according to their dominant goal orientations. Goal orientations were measured using short student characterisations called Vignettes. Each respondent indicated one student he or she resembled most. The use of this 'single option' minimised chance response biases. The researchers performed a mediation analysis for multi-categorical independent variables with a general linear model approach to estimate direct and indirect effects. There was a main effect of goal orientation on achievement

indicating that academic achievement was different for students with different goal orientation.

The result showed that there were no differences in grades between students with mastery goals and performance-approach goals, though mastery goals were related to more adaptive strategy use than performance goals. Mastery and performance-approach students received higher grades than their performance-avoidance counterparts. The mediation model showed that there was a partial mediation effect. It showed that goal orientations predicted achievement through metacognitive self-regulation. It showed that the higher levels of metacognitive self-regulation could explain higher grades obtained by performance-approach students, compared to performance-avoidance and work-avoidance students. Dekker et al. (2016) study contributed knowledge in the field of achievement motivation by documenting the value of vignettes in assessing the dominant goal orientation. However, the study did not address complexity in goal orientation as students may endorse multiple goals simultaneously. The current study addressed this issue by using an instrument that gives students more response options.

Phan (2013) conducted a study to examine predictors and consequences of achievement goal orientations of 277 first-year students from a university in Australia. The researcher adopted the  $2 \times 2$  model of achievement goals. The researchers hypothesised that there would be a significant positive relationship among mastery-approach, performance-approach goals, and academic performance. The study also hypothesised that mastery-avoidance and performance-avoidance goals would have a significant negative effect on academic performance. When the four dimensions of achievement goals were regressed on academic achievement, the study reported that only performance-approach goal had a significant influence on academic achievement. The authors explained the non-significant influence of mastery goals on academic achievement, stating that, university students may have been influenced by messages they received, about the value of normative evaluation, thus influencing preference for performance-approach goals. The current study sought to establish whether the findings of Phan (2013) would hold for students at a lower level of education and from a different socio-economic setting.

Hornstra, Majoor and Peetsma (2017) adopted multiple goal perspectives on a sample of 722 students from 25 schools across the Netherlands, to examine whether students' academic achievement goal profiles and transition between those groups were associated with academic achievement in upper elementary school. The participants' ages ranged from 8 to 12 years old. It specifically related students'

achievement goal profiles to development in academic achievement in language and mathematics. The researchers used latent profile analyses and identified three types of achievement goal profiles. The first profile was labelled 'approach-oriented', and it had relatively high mastery and performance-approach goals and low performance-avoidance goals. The second profile was labelled 'moderate-indifferent', and it had average scores on each of the three goals. The third profile had relatively high avoidance goals, relatively high scores in mastery and performance-approach goal and was labelled 'multiple goals'. It was expected that approach-oriented profile would show the highest academic achievement. The research findings confirmed that approach-oriented profile showed the highest academic gains. The students with 'multiple goals' profiles had the lowest achievement gains. The study by Hornstra et al. (2017) was conducted amongst elementary school students in the Netherlands. The current study was conducted among secondary school students in Nairobi, Kenya, which is a different socio-economic setting.

Ng'ang'a and Mwaura (2018) used a sample of 665 form three students drawn from Kiambu County to determine the relationship amongst students goal orientations and academic achievement. The study used a mixed method sequential explanatory design. Purposive sampling technique was used to select Gatundu South Sub-County. Stratified random sampling was used to obtain 12 schools. Proportionate stratified sampling was used to select girls' only, and boys' only boarding, co-educational boarding and co-educational day schools. The study adopted achievement goal orientation scales to measure goal orientation. The study selected 40 respondents for an interview. Academic achievement was measured using students examination grades obtained from school records. The findings showed evidence of a weak linear relationship between achievement goal orientation and academic achievement ( $R^2 = 16.6\%$ ). The study used a bivariate correlation analysis by Pearson Product Moment Correlation Coefficient to test the hypotheses.

The findings revealed that all dimensions of achievement goal orientation significantly correlated with academic achievement. There were statistically significant positive relationships between mastery-approach goals and academic achievement; mastery-avoidance goals and academic achievement; performance-avoidance goals and academic achievement. There was, however, a statistically significant negative relationship between performance-approach and academic performance. Results from performance-approach goals have shown mixed patterns whereby some studies have found that they are not associated with positive outcomes (Ng'ang'a & Mwaura, 2018; Was, 2013).

Others have shown that they predict academic performance (Hornstra et al., 2017; Mouratidis et al., 2018; Phan, 2013). It remains unclear whether performance-approach, performance-avoidance goals negatively or positively correlate with academic performance. The current study conducted in a neighbouring county using Form three students drawn from public secondary schools could help explain the mixed findings. Apart from using the Pearson Product Moment Correlation Coefficient to establish the bivariate correlation, the current study further applied regression analysis to establish the predictive values of the three dimensions of achievement goals on academic achievement.

Ileri (2015) conducted a study on the relationship among academic identity status, achievement goal orientation and academic achievement of form three learners in Embu County, Kenya. The study evaluated whether academic identity status and goal orientation predicted the academic performance of secondary schools students in Embu County. The sample consisted of 390 form three students from public secondary schools in Mbeere South Sub County. Quantitative data was collected using the Achievement Goal Orientation Questionnaire. Academic achievement was inferred from students' academic grades. The research findings indicated that approach achievement goal orientation and academic achievement were significantly and positively correlated. The study also reported that avoidance achievement goal orientation and academic achievement were significantly but negatively correlated. The study included only form three students from Embu County, and therefore, results may not be very representative of the secondary schools in Kenya. In the study, achievement goal orientations were collapsed into two dimensions: approach and avoidance. This did not address the mastery versus performance achievement goal dimension as suggested by the achievement goal orientation theory. To address these gaps, the current study was conducted with a sample drawn from a different county. The current study, therefore, sought to establish whether the trichotomous model of achievement goal orientation captures more distinct differences in Kenyan students' achievement goals

Cumulatively the findings appear to point to a central role of achievement goals in academic achievement. However, the findings are inconclusive on the predictive value of achievement goals and this call for further research.

### **Research Variables**

The predictor variable in the study was achievement goals. Achievement goals had three levels: mastery, performance-approach, and performance-avoidance.

**Hypothesis Testing for the Objective**

The null hypothesis was:

H<sub>01</sub>: There is no significant relationship between achievement goals and academic achievement.

To make the hypothesis more testable, the following supplementary null hypotheses were formulated:

H<sub>01.1</sub>: There is no significant relationship between mastery goals and academic achievement.

H<sub>01.2</sub>: There is no significant relationship between performance-approach goals and academic achievement.

H<sub>01.3</sub>: There is no significant relationship between performance-avoidance goals and academic achievement.

To test the null hypotheses, the Pearson Product-Moment Correlation Coefficient was computed. Table 1 shows the correlation results between the different levels of personal achievement goals and academic achievement.

**Table 1: Correlations between Achievement Goals and Academic Achievement**

		Acad Ach.	MG	PAP	PAV
Acad Ach.	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	597			
MG	Pearson Correlation	.168**	1		
	Sig. (2-tailed)	.000			
	N	597	597		
PAP	Pearson Correlation	.182**	.055	1	
	Sig. (2-tailed)	.000	.180		
	N	597	597	597	
PAV	Pearson Correlation	-.153**	-.132**	.155**	1
	Sig. (2-tailed)	.000	.001	.000	
	N	597	597	597	597

Note. N = 597.

\*\*Correlation is significant at  $p < .05$  (2-tailed).

As presented in Table 1, the research findings show that performance-approach goals had a significant positive correlation with academic achievement; [ $r(595) = .18, P < .05$ ]. This suggests that the increase in levels of performance-goals were associated with increases in academic performance. There was a significant negative correlation between performance-avoidance goals and academic achievement;  $r(595) = -.15, p < .05$ . Increase in performance-avoidance levels was associated with a decrease in levels of academic performance of the students. There was also a significant positive relationship between mastery goals and academic achievement;  $r(595) = .17, p < .05$ . When students levels of mastery goals increased, their levels of academic achievements also increased.

**DISCUSSION OF THE RESULTS**

The current study found a significant positive correlation between mastery goals, performance-approach goals and academic achievement. The findings were consistent with Was (2013) which equally showed that mastery goals predicted academic achievement. Unlike the current findings, however, Was (2013) study, did not get clear relations between performance-approach goals and academic achievement. It equally contradicts Phan (2013) study which found that only performance-

approach goals influenced academic achievement. Unlike the current study which found a significant correlation between mastery-approach goals and academic achievement, M.Hall, Hanna, Hanna, and Hall (2015) did not find significant contributions of mastery-approach and performance-approach on academic achievement.

The current results are consistent with the findings by Ileri (2015) which reported a significant positive relationship between approach achievement goals and academic achievement. The current research findings may be attributed to the dominance of mean grade-focused evaluation practices in the Kenyan educational system. The current study found a significant negative correlation between performance-avoidance and academic performance; [ $r(595) = -.15, p < .05$ ]. The result is consistent with findings by Ileri (2015) which similarly found a significant negative correlation between avoidance goals and academic achievement.

The current results, however, differed from findings by M.Hall et al. (2015) which reported an insignificant correlation between performance-avoidance goals and academic achievement. The findings contradict those reported by Phan (2013) which reported an insignificant correlation between performance-avoidance and academic achievement.

The current findings which indicated that mastery goals had the strongest correlation are in line with results found by Hornstra, Majoor and Peetsma (2017) which reported that approach-oriented profile showed the highest academic gains. The current study indicated that all three dimensions of achievement goals correlated with academic achievement. These findings are consistent with those reported by Ng'ang'a and Mwaura (2018) that equally revealed that all the three dimensions of achievement goal orientation significantly correlated with academic achievement. However, it contradicts their findings of the direction of the correlation. Whereas the current study reported a positive correlation between performance-approach goals and academic performance, theirs found a negative correlation.

### CONCLUSION AND IMPLICATIONS

The study, therefore, provided pointers to the fact that both mastery and performance-approach goals can support students' learning. Mastery goals only may not be helpful in every context or for all students. The findings support a goal perspective that considers unique ways in which two goals can be beneficial (Harackiewicz et al., 1997). The two goals perspective recognises the benefits of both mastery and performance goals.

Based on the findings, the researcher suggests that for better academic achievement, it is important to adopt achievement goal orientation towards developing as well as demonstrating competence. Mastery goals only may not be helpful in every context or for all students.

The findings may contribute to an increase in the knowledge base for teachers who may need to implement appropriate classroom practices that encourage to a greater extent the adoption of mastery goals, and performance-approach goals thus enabling students to improve in academic achievement and therefore able to reach their full potential. The findings may also inform teachers on the need to train students on achievement goal setting.

### LIMITATIONS AND FUTURE RESEARCH

First, the current study was purely quantitative, and therefore it was not possible to get in-depth information about achievement goals of the participants in their own words. Future studies should consider a mixed method approach to get a deeper understanding of students' achievement goals. Secondly, it was a correlational study. It was not possible to make causal explanations of the results. Future causal studies should be conducted to address this need. Thirdly, the study relied on self-reporting by the respondents which made it difficult to rule out some degree of subjectivity in the findings

### REFERENCES

- Anderman, E.M. & Patrick, H. (2012). Achievement goal theory, conceptualization of ability, intelligence, and classroom climate, In S.L.Christenson and A. L. Reschly (Eds), *Handbook of Research on Student Engagement*. Springer Science + Business Media. Doi 10.1007/978-1-4614-2018-7-8.
- Bücker, S., Nuraydin, S., Simonsmeier, B. A., Schneider, M., & Luhmann, M. (2018). Subjective well-being and academic achievement: A meta-analysis. *Journal of Research in Personality*, 74( 2018), 83–94. <https://doi.org/10.1016/j.jrp.2018.02.007>.
- Covington, M.V. (1984).The self-worth theory of achievement motivation: Findings and implication. *The Elementary School Journal*, 85(1), 4-20.
- Covington, M. V. (1998). *The will to learn: a guide for motivating young people*, New York: Cambridge University Press.
- Dekker, S., Krabbendam, L., Lee, N., Boschloo, A., De Groot, R., & Jolles, J. (2016). Dominant goal orientations predict differences in academic achievement during adolescence through metacognitive self-regulation. *Journal of Educational and Developmental Psychology*, 6(1), 47. <https://doi.org/10.5539/jedp.v6n1p47>
- Elliot, A.J. (1999). Approach and avoidance motivation and achievement goals. *Educational Psychologist*, 34(3), 169-189.
- Elliot, A. J., & Dweck, C. S. (Eds.) (2005). *Handbook of competence and motivation*. New York, NY: Guilford Press.
- Elliot, A. J., & Church, M. (1997). A hierarchical model of approach and avoidance achievement motivation. *Journal of Personality and Social Psychology*, 72, 218-232.
- Grant, H., & Dweck, C. S. (2003). Clarifying achievement goals and their impact. *Journal of Personality and Social Psychology*, 85, 541–553.
- Hall, M., Hanna, L.-A., Hanna, A., & Hall, K. (2015). Associations between Achievement Goal Orientations and Academic Performance Among Students at a UK Pharmacy School. *American Journal of Pharmaceutical Education*, 79(5), 64. <https://doi.org/10.5688/ajpe79564>.
- Harackiewicz, J. M., Barron, K. E., Carter, S. M., Lehto, A. T., & Elliot, A. J. (1997). Predictors and consequences of achievement goals in the college classroom: Maintaining interest and making the grade. *Journal of Personality and Social Psychology*, 73(6), 1284-1295.

- Hornstra, L. Majoor, M. Peetsma, T.(2017). Achievement goal profiles and developments in effort and achievement in upper elementary school. *British Journal of Educational Psychology*, 87, 606-629. [https://doi: 10.1111/bjep.12167](https://doi.org/10.1111/bjep.12167)
- Ireri, A. I. (2015). Academic identity status and achievement goal orientation as predictors of academic achievement among form three students in Embu County, Kenya (Unpublished doctoral thesis), Kenyatta University, Nairobi, Kenya.
- Middleton, M. J., & Midgley, C. (1997). Avoiding the demonstration of lack of ability: An underexplored aspect of goal theory. *Journal of Educational Psychology*, 89, 710-718.
- Mouratidis, A., Michou, A., Demircioğlu, A. N., & Sayil, M. (2018). Different goals, different pathways to success: Performance-approach goals as direct and mastery-approach goals as indirect predictors of grades in mathematics. *Learning and Individual Differences*, 61,127–135.
- Ng'ang'a, M. W. & Mwaura, P. M.(2018).Relationship between achievement goal orientation and academic achievement among form three students in Kiambu County, Kenya. *International Journal of Education and Research*, 6(4), 53-68.
- Otanga H. F. (2016).Predictors of academic disidentification among form three secondary school students in Mombasa County, Kenya. (Unpublished doctoral thesis), Kenyatta University, Nairobi.
- Phan, H. P. (2013). The predictiveness of achievement goals: A  $2 \times 2$  framework analysis from a social cognitive perspective. *Europe's Journal of Psychology*, 9(4), 697-716. <https://doi.org/10.5964/ejop.v9i4.640>.
- Was, C. A. (2013). Knowledge monitoring, goal orientations, self-efficacy, and academic performance: A path analysis. *Journal of College Teaching & Learning* 10(4), 263-278