

**EFFECT OF TEACHING MANAGEMENT STRATEGIES
ON ACADEMIC PERFORMANCE OF SECONDARY SCHOOLS
IN NYAMIRA COUNTY; A FOCUS OF MANGA SUB COUNTY**

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ABSTRACT

Purpose of the study: The study examined the effect of teaching management strategies on the academic performance of secondary schools in Manga Sub County. The specific objectives of the study were to establish the effect of teaching management strategies, student-centered management strategy, teacher-centered management strategy and assessment strategy on academic performance. Government intervention was used as a moderating variable.

Statement of the Problem: The academic performance of secondary schools in Manga Sub County has been low compared to other secondary schools in other sub-counties. The average mean score posted by the schools is wanting. The average mean score was 5.881 in 2015, 4.187 in 2016, 4.114 in 2017, 4.0951 in 2018 and 4.6359 in 2019. The average mean score is below the average, given that the maximum point is 12.

Research methodology: The study adopted both the descriptive research design and explanatory research design. The targeted population was 33 secondary schools. The units of observation were teachers. The average number of teachers from each school, were 27, thus giving a total of 891 (27*33) teachers. The sample size of teachers 276 that were obtained by using the Yamane formula.

Research findings: Student centered management strategy, teacher centered management strategy and assessment strategy were positively and significantly associated to academic performance. The joint teaching management strategies (assessment management strategy, teacher centered management and student-centered management) were found to be significant in determining academic performance. The teaching management strategies predict 53.5% of change in the academic performance. The regression analysis exhibited a unit increase in student-centered management strategy leads to a rise in academic performance by 0.489 units when other factors are held constant. It was found a unit increase in teacher centered management will result in 0.475 units increase in academic performance. A unit increase in assessment strategy would increase the academic performance by 0.494 units while other factors are held constant. The study found that

when government intervention jointly interacts with student centered management strategy, teacher centered management strategy and assessment strategy, the coefficient of determination (R squared) increased from 53.5% to 60.7%.

Conclusions: The study concluded that student centered management strategy, teacher centered management strategy and assessment strategy were positively and significantly related to academic performance.

Recommendation: The study recommended that schools adopt joint teaching management strategies (assessment management strategy, teacher centered management and student-centered management) since they were found to predict 53.5% of academic performance change. The study also recommended schools can employ any of the three-teaching management strategies. The assessment strategy had the highest effect on academic performance and should be the most applied within the schools. There should be continuous assessment tests to reinforce students' learning of materials in a systematic way. The schools need to have regular formative assessments, give continuous assessment tests.

Keywords: *Teaching management strategies, student centered management strategy, teacher centered management strategy, assessment strategy, secondary schools, Manga Sub County, Nyamira County*

1.0 BACKGROUND OF THE STUDY

The academic performance is notable to the students and is the analysis of student achievement across various academic subjects (Boonen, Van Damme & Onghena, 2014). Teachers prominently measure the progress of the students by conducting regular assessment tests. Besides, according to Omae, Onderi and Mwebi (2017), the students' performance in Kenya is ascertained by doing the national examination that is mandatory to all the students after completing eight years in primary school and four years in the secondary school. Furthermore, co-curricular activities are indispensable to determine the performance of the students (Ganyaupfu, 2013). Academic performance is the measurement of student achievement across different academic subjects that are offered in a particular period (Teygong, Moses & Daniel, 2018). According to Jawadin and Gembes (2016), Ubulom and Ogwunte (2017), Kharisma (2016) and Ganyaupfu (2013), the academic performance of the students is inspired by the teaching management strategies adopted by the teachers.

The teaching management strategies are significant and entail different methods applied by teachers to assist students in learning and understanding the subject content (Schultz & Baker, 2017). According to Omae, Onderi and Mwebi (2017), based on the teaching strategies used by the teachers, students become capable of developing attainable goals in the present time as well in the future. Teachers are deemed to develop the most appropriate teaching strategy that will increase the performance of the students both academically in other co-curricular activities (Jawadin & Gembes, 2016). Based on the findings of Kharisma (2016), Ubulom and Ogwunte (2017), Moyosore (2015) and Kassem (2019), some of the most used teaching strategies across the World include student-centered management strategy, teacher-centered management strategy and assessment management strategy. Student centered management strategy happens when the students in the classroom are given the majority of the responsibilities to undertake (Okumu,

Maithya & Ronoh, 2017). In student centered management strategy, the students take most of the function in the classroom, such as teaching and demonstrating a specific concept (Onderi & Makori, 2013).

The teacher centered management strategy arises when most of the activities in the classroom are undertaken by the teacher (Omae, 2018). According to Lund and Stains (2015), using the teacher centered management strategy enables the students to remain calm and orderly in the entire period. The teacher centered management approach makes the students become quiet and thus allows the teacher to maintain full control of the classroom and all the activities taking place (Kharisma, 2016). The importance of teacher centered management approach is that it enables the students to become more independent and make their own decisions because the students are learning on their own with the help of the teachers (Teygong, Moses & Daniel, 2018). The assessment management strategy involves the evaluation of the students based on what they have been taught previously (Ubulom & Ogwunte, 2017). The assessment strategy enables teachers to evaluate whether the method they are using is useful and beneficial to the students (Omae, Onderi & Mwebi, 2017). The assessment management strategy can entail administering continuous assessment tests to the students to evaluate their understanding throughout a prescribed course (Jawadin & Gembes, 2016).

The government plays a critical role in the academic performance of the students (Lund & Stains, 2015). The government is involved in curriculum development and also initiates the time to be taken before students go for a break (McKean, 2014). According to Ebibi, Akubo, Afekereta and Bako (2015), the government is involved in the assessment of teachers based on the methods they are using to pass the information and complete the curriculum. The government policy offers uniform education standards to be enforced by all the teachers and principals in schools (Schultz & Baker, 2017). Nyangaresi, Onderi and Mwebi (2016) revealed that devising accountability among the key education players enhances teacher responsibility, thus increasing the students' performance.

1.1 STATEMENT OF THE PROBLEM

The academic performance of secondary schools in Manga Sub County has been low compared to other secondary schools in other sub-counties. The average mean score posted by the schools is wanting. The average mean score was 5.881 in 2015, 4.187 in 2016, 4.114 in 2017, 4.0951 in 2018 and 4.6359 in 2019. The average mean score is below the average, given that the maximum point is 12. This implied most schools have been reporting a mean grade of D (plus) since 2015. The key education stakeholders in the Manga sub-county need to be more concerned with poor performance and what strategies to be used in secondary schools in Nyamira South Subcounty to perform better. Therefore, the poor academic performance in the sub-county may be a result of teaching strategies being used within the secondary schools in the sub county, thus formed the justification of conducting the investigation.

However, the information about the influence of teaching strategies on the academic performance of secondary schools in manga Sub County remains scanty. For instance, Samson and Allida (2018) examined the impact of continuous assessment on academic performance in primary schools of ibulanku sub-county hence a contextual gap. Likewise, Omae (2018) investigated the predictors of quality education in public secondary schools in Kenya, thus a conceptual gap since it examined the predictors of quality education. Furthermore, Okumu, Maithya and Ronoh (2017)

reviewed the influence of students' participation in drama on kcse performance in public secondary schools in Nakuru County, thus form a conceptual gap because the study was more concerned with drama. Moreover, Nyangaresi, Onderi and Mwebi (2016) examined the influence of school-based income-generating activities on student retention rates in secondary education in Kenya, thus presents a conceptual gap because the study was more concerned with school-based income-generating activities on student retention rate. It is evidenced that none of the studies examined the influence of teaching strategies on the academic performance of secondary schools in manga sub-county in Nyamira County, thus formed a knowledge gap that needed to be ascertaine

1.2 RESEARCH OBJECTIVES

- i. To determine the effect of teaching management strategies on the academic performance of secondary schools in Nyamira County.
- ii. To establish the effect of student centered management strategy on academic performance of secondary schools in Nyamira County.
- iii. To assess the effect of teacher centered management strategy on academic performance of secondary schools in Nyamira County.
- iv. To investigate the effect of assessment strategy on academic performance of secondary schools in Nyamira County.
- v. To determine the moderating effect of government intervention on academic performance of secondary schools in Nyamira County.

2.0 LITERATURE REVIEW

2.1 THEORETICAL REVIEW

2.1.1 Gagne's theory of instruction

The proponent of Gagne's theory of instruction was Robert Gagne in 1965. The theory reveals that teaching methods of the teachers influence the performance of the students to a large extent. The theory further establishes that there are several and different types of learning and each requires different types of instruction. Teachers can choose the teaching strategies, taking into consideration the learning contexts, selecting appropriate materials and activities for students to achieve desired learning outcomes. Five teaching categories entail, according to the theory, comprise of the verbal information, intellectual skills, cognitive strategies, motor skills and attitudes. Tapproachory shows that mental abilities can be hierarchically arranged according to stimulus recognition, response generation, concept formation, rule application and problem-solving. The theory shows that teachers will be able to choose the teaching strategies, taking into consideration the learning contexts, selecting appropriate materials and activities for students to achieve desired learning outcomes. Teachers should be able to design the instruction to include the instruction methods based on the learners' needs. The theory shows that teachers need to develop teaching approaches that will be favorable to the students and motivate them to become critical thinkers. Therefore, the theory will be applicable while examining the influence of teaching strategies on the students' performance in secondary schools in Manga sub-county in Nyamira County.

2.1.2 Integrated education theory

Thomas Shuell developed the integrated education theory in 1993. The theory states that learning tasks are expected to help students integrate and cognitively with emotions and intentions in a variety of teaching methods. Learning Tasks should build on previous activities and avoid being repetitive and should enable students to engage with and develop their skills, knowledge and understandings in different ways. The theory establishes that there is a desired relationship among thinking, willing and feeling during the learning process. Ideally, the learning task is something that the student intends to do, his or her thinking is focused on the learning task, and she or he feels strongly about this activity. The theory goes on to reveal that when teachers design or choose authentic learning tasks, it will help students appreciate the value of those tasks, be motivated, satisfied and develop a positive attitude towards learning hence good performance.

This theory is relevant to this study, as it highlights how teachers will engage students in in-class activities to know what they are learning. This theory suggests that students' learning takes place when they integrate and are cognitive with emotion and feeling. Teachers should use multiple teaching strategies while teaching so that when one approach is not working, the other procedure will probably work. The theory helps to understand that both teachers and students have roles to play for effective teaching and learning. Therefore, the teaching strategies to be utilized by the teacher will significantly determine academic performance. Therefore, the theory will apply to the current study that will examine the influence of the teaching strategies on the performance of the students in Banda Sub-county in Nyamira County.

2.2 EMPIRICAL REVIEW

2.2.1 Student centered strategy and academic performance

Kassem (2019) examined the impact of student centered instruction on the performance of the learners undertaking English as a Foreign Language in Saudi Arabia. Two classes of English department freshmen at Shaqra University and KSA participated in the study. The findings revealed that there was a positive impact between using a learner centered approach and student performance. The study concluded that the learner centered approach is more significant than the teacher-centered method on performance since it gives more participation of the students. McKean (2014) conducted a study to examine the effects of implementing student-centered learning on academic performance. The researcher adopted an experimental research design that establishes the cause of certain phenomena and there is the manipulation of independent variables. The working group of the study consisted of experiment and test groups, with 60 people chosen randomly. It was found that the performance was significantly higher in the group where student-centered methods were applied compared to the teacher centered group and other teaching strategies.

Jepketer (2017) investigated the influence of teaching strategies on students' performance in academic achievement and co-curricular activities in public secondary schools in Nandi County. Qualitative data collected was analyzed thematically. The correlation and regression analysis revealed that there was a significant and positive relationship between the teaching strategies and students' performance. The multiple regression analysis revealed that student centered instruction strategy was the most significant, followed resource-based instruction strategy and teacher lastly

focused instruction strategy. The study concluded that student centered instruction strategy was the vital strategy to improve on the performance.

2.2.2 Teacher centered strategy and academic performance

Ubulom and Ogwunte (2017) examined the influence of teacher-centered and learner-centered methods for instructional delivery of senior secondary schools financial accounting in Rivers State. The population for the study was made up of 834 accounting teachers in public secondary schools. A sample size of 250 respondents was used for the study. Findings revealed that the teacher-centered instructional method was ineffective, while the learner-centered approach was very effective in teaching accounting subjects at the secondary school level. It was recommended among others that the learner-centered approach, which was adjudged to be very useful, be made compulsory in teaching accounting subjects in all secondary schools in Rivers State.

Boonen, Van Damme and Onghena (2014) investigated the effect of teachers (background qualifications, attitudes and beliefs, and instructional practices) on student performance. The targeted population consisted of teachers and students in Flemish primary education. The study was analyzed using a 2-level regression analysis. The results showed that teacher background had the most substantial effect on mathematics achievement, whereas instructional practices had the most considerable impact on both reading and spelling achievement. The study concluded that the influence of the teachers is significant to the performance of the students. Ganyaupfu (2013) investigated the effectiveness of teaching methods on students' academic performance. A sample of 109 undergraduate students from the College's Department of Economic and Business Sciences was used for the study. The results demonstrated that the teacher-student interactive method was the most effective teaching method, followed by a student-centered method. At the same time, the teacher-centered approach was the least effective teaching method. The study recommended that teachers should use the technique that is friendlier to the students to adapt.

2.2.3 Assessment strategy and academic performance

Samson and Allida (2018) examined the influence of continuous assessment on academic performance in primary schools of the Ibulanku sub-county, Uganda. The study used descriptive design, specifically literature from the library and key informant interviews were used to complement the information on the influence of continuous assessment on academic performance in primary schools. The findings showed that constant assessment is vital and improves a child's educational performance. The study concluded that continuous assessment is positively and significantly related to academic achievement, but Uganda's teachers were not conducting the evaluation as required.

Gholami and Moghaddam (2016) conducted a study to examine the effect of weekly quizzes on students' final achievement scores. The researcher took 70 students studying in grade two of high school and divided them into two groups. One group received weekly quizzes and the other group took the only midterm exams. The results indicated that the group with weekly quizzes performed better than the group without quizzes. The results revealed that frequent quizzes stimulate practice and review, give the students more opportunities for feedback and have a positive influence on students' study time. Moyosore (2015) examined the effect of formative assessment on students' achievement in secondary school mathematics. The experimental research design was employed. One hundred and twenty (120) Mathematics students in secondary II Art classes in two public

schools in Iseyin Local Government of Oyo State, Nigeria selected through purposive technique made up the study sample. Findings from the analysis revealed that formative assessment has a positive relationship on students' achievement.

2.2.4 Government intervention and academic Performance

Kharisma (2016) examined the effect of involvement of the government through the Law No. 20/2003 of National Education System on education qualities, particularly in the public junior secondary school in various provinces in Indonesia during the period of 2000-2004 and to analyze the government's role in providing an education of typical level using panel data analysis and literature review. The results showed that the role of government through routine expenditure for the public junior secondary school level is significant compared to development expenditure in improving the quality of education. In addition, Law No. 20/2003 of the National Education System had a positive effect on the quality of education on public junior secondary school level in Indonesia.

Jawadin and Gembes (2016) carried out a study to determine the mediating effects of government on the relationship between the intellectual leadership of school heads and the productivity of public elementary schools. The study involved 391 teachers and the results of the correlation and regression analysis revealed the existence of significant relationships between transcendental leadership of school heads, institutional productivity and government. The findings further revealed the presence of partial mediation on the effect of government on the relationship between intellectual leadership of school heads and institutional productivity. Omae, Onderi and Mwebi (2017) conducted a study on quality implications of learning infrastructure on performance in secondary education in Kisii County, Kenya. The study used a sequential explanatory design within a mixed-methods approach. The findings indicated that libraries, science laboratories, administrative offices, electricity, latrines and classrooms contributed immensely to student academic achievement. The study concluded that the government should be involved and ensures there are adequate libraries, science laboratories, administrative offices, electricity, latrines and classrooms and the achievements of the students will improve significantly.

2.3 CONCEPTUAL FRAMEWORK

The conceptual framework is a diagrammatical representation that shows the relationship between dependent and independent variables. Therefore, Figure 1 shows the conceptual framework illustrating the relationship between teaching strategies and academic performance.

Teaching Management Strategies

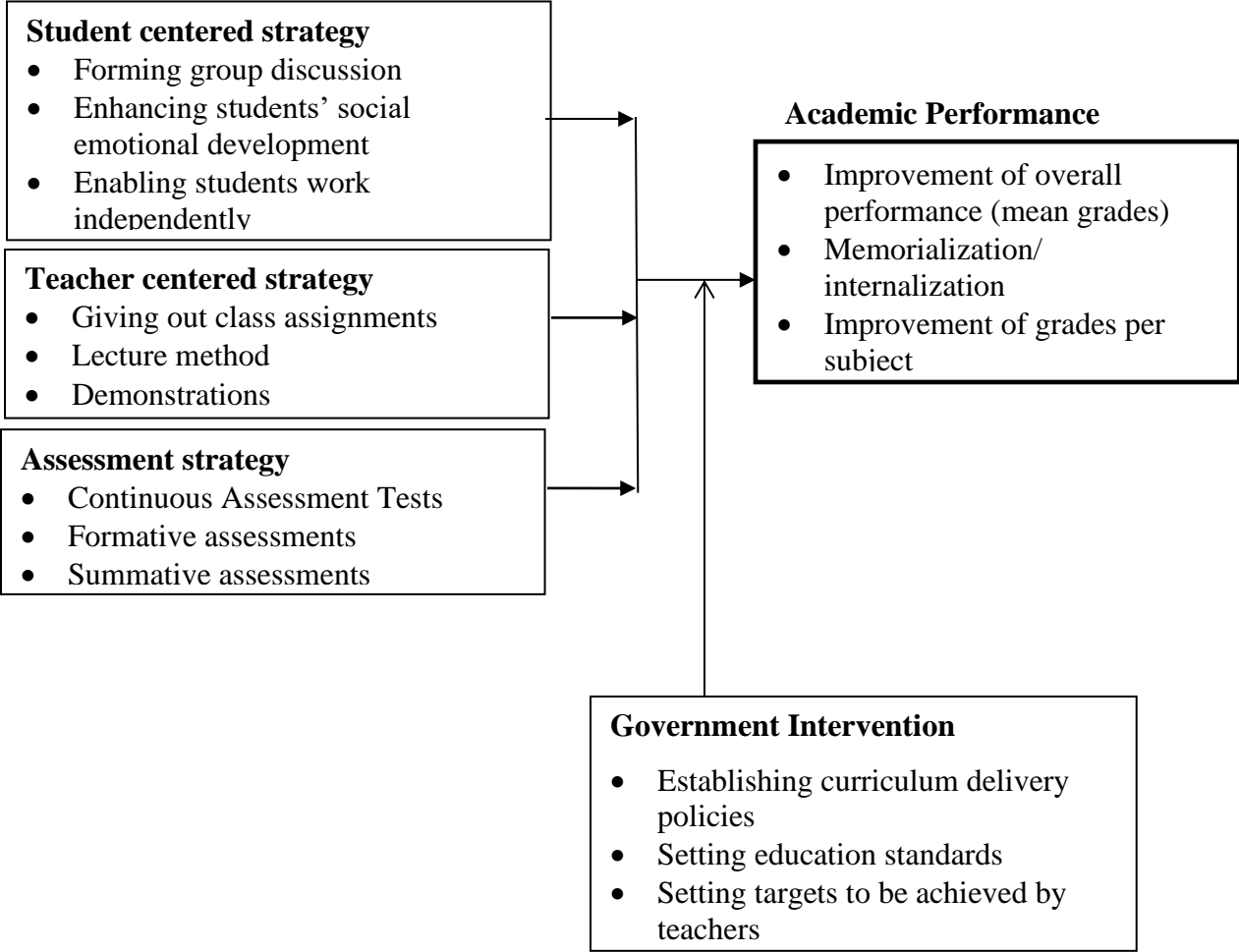


Figure 1: Conceptual Framework

3.0 RESEARCH METHODOLOGY

This study adopted both the descriptive research design and explanatory research design. The descriptive study design is utilized when gathering data about individuals' attitude, opinions and habits (Patten & Newhart, 2017). The explanatory research design is also deemed appropriate for the study since the researcher aimed at explaining the casual relationship of the variables. The target population was 33 secondary schools within Manga Sub County. The unit of observation were teachers. The average number of teachers from each school, were 27, thus giving a total of 891 (27*33) teachers. The sample size of teachers were 276 computed using Yamane (1967). The researcher used the questionnaire to collect data from the teachers and students.

4.0 RESULTS AND PRESENTATION

4.1 Response Rate

The researcher distributed 276 questionnaires to all secondary schools in Manga Sub County. Out of the total questionnaires administered two hundred and thirty-nine (239) questionnaires were filled and returned. This represents 86.6% response rate.

4.2 Inferential Analysis

Multiple linear regression, simple linear regression and hierarchical regression analysis were used to test effect of teaching management strategies on academic performance of secondary schools in Nyamira County; a focus of manga sub county. However, before regression analysis was conducted, assumptions of regression analysis were first tested.

4.2.1 Assumption of Normality

Normality of data was assessed using Skewness and Kurtosis statistics (Tabachnick & Fidell, 2007). Page (2007) indicated that data skewness values must fall within +1.00 and -1.00 and kurtosis values must be in the range of +3.00 and -3.00. If both tests have been fulfilled, then the data can be considered as normally distributed and no any skewed distribution.

Table 1: Assumption of Normality

	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
Teacher Centered Management	239	-.498	.157	-.841	.314
Assessment Management Strategy	239	-.522	.157	-.390	.314
Government Intervention	239	-.407	.157	-.837	.314
Student Academic Performance	239	-.858	.157	1.921	.314

The study results presented in Table 1 indicated that normality assumption was supported, with Skewness and Kurtosis values falling within stated ranges.

4.2.2 Multicollinearity

The Variance Inflation Factor (VIF) measures the impact of co linearity among the variables in a regression model. Values of VIF that exceed 10 and Tolerance level of less than 1 are often regarded as indicating Multicollinearity (Tabachnick & Fidell, 2001).

Table 2: Multicollinearity

Model	Collinearity Statistics	
	Tolerance	VIF
1 (Constant)		
Student Centered Management	.498	2.007
Teacher Centered Management	.572	1.748
Assessment Management Strategy	.422	2.368

According to Table 2 Variance Inflation Factor (VIF), Tolerance is within the threshold ranges hence no multicollinearity.

4.2.3 Autocorrelation

Autocorrelation occurs when the residuals are not independent from each other (Tabachnick & Fidell, 2001). The linear regression model was tested for autocorrelation using Durbin-Watson test. Values between $1.5 < d < 2.5$ indicates that there is no auto-correlation in the data.

Table 3: Autocorrelation

Model	Durbin-Watson
1	1.682

According to Table.3 the Durbin-Watson was 1.682 which was within the range hence there was no autocorrelation.

4.3 Correlation Analysis

Pearson product moment correlation coefficient (r) was used to establish a correlation between the study variables. Correlation coefficient shows the magnitude and direction of the relationship between the study variables.

Table 4: Correlation Matrix

		Student Centered Management	Teacher Centered Management	Assessment Management Strategy	Student Academic Performance
Student Centered Management	Pearson	1.000			
	Correlation				
	Sig. (2- tailed)				
Teacher Centered Management	N	239			
	Pearson	.548**	1.000		
	Correlation				
Assessment Management Strategy	Sig. (2- tailed)	.000			
	N	239	239		
	Pearson	.695**	.638**	1.000	
Student Academic Performance	Correlation	.000	.000		
	Sig. (2- tailed)	.000	.000	.239	1.000
	N	239	239	239	239

** . Correlation is significant at the 0.01 level (2-tailed).

The study findings presented in Table 4 show a moderate, significant and positive relationship between student academic performance and student-centered management ($r= 0.489, p<.01$). The study also indicated a strong, positive and significant relationship between teacher centered management and student centered management ($r= .575, p<.01$). This implied that, an increase in teacher centered management would lead to an increase in student centered management. The results further showed that there is a strong and significant relationship between Assessment Management Strategy and student centered management ($r=.538, p<.01$).

4.3 Regression Analysis

The study identified Student centered Management Strategy, Teacher centered Management Strategy and Assessment Management Strategy as the imperative factors that determined Student Academic Performance as highlighted in the reviewed literature with Government Intervention as a moderator. These independent variables and moderator were then subjected to hierarchical regression analysis to establish their effect on student academic performance which was the dependent variable.

4.3.1 Effects of Student-Centered Management on Academic Performance

The model summary of effects of student-centered management on academic performance is depicted in Table 5

Table 5: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.489 ^a	.336	.332	.60594

The model summary presented in Table 5 shows the coefficient of determination (R squared) of 0.336 indicating that the model explained only 33.6% of the total variation in the dependent variable.

Table 6: ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.217	1	3.217	81.761	.003 ^b
	Residual	87.016	237	.367		
	Total	90.233	238			

ANOVA output was examined to check whether the proposed model was viable. Results shown in Table 6 reveal that the F-statistic was highly significant (F= 81.761, P<0.05), this shows that the model was valid. The model significantly improved the ability to predict competitiveness. Thus, the model was fit.

Table 7: Regression Coefficients

Model		Unstandardized Coefficients		Standardized	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.079	.201		15.284	.000
	Student Centered Management	.342	.048	.489	10.960	.003

Results of the regression coefficients presented in Table 7 shows that the estimates of β values and gives the student centered management contribution to the model. The positive β value indicates a positive relationship between the students centered management and academic performance. The unstandardized coefficient for competitiveness (.489) was positive. From the results (Table 7) the model was then specified as: -

$$Y = 3.079 + 0.342X_1$$

4.3.2 Effect of Teacher Centered Management on Academic Performance

The model summary of effect of teacher centered management on academic performance is illustrated in Table 8

Table 8: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.475 ^a	.225	.222	.54307

The model summary presented in table 8 shows the coefficient of determination (R squared) of 0.225 indicating that the model explained only 22.5% of the total variation in the dependent variable.

Table 9: ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	20.335	1	20.335	68.950	.000 ^b
	Residual	69.898	238	.295		
	Total	90.233	239			

Table 9 reveals that the F-value of 68.950 and a p-value of 0.000, which is significant at 5% level of confidence, indicate that the regression model is best fit; hence, teacher centered management was significant in predicting student academic performance of secondary schools in Nyamira County. In this regard, we reject the null hypothesis stating that there is no significant effect of teacher centered management strategy on academic performance of secondary schools in Nyamira County.

Table 10: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.405	.156		15.455	.000
	Teacher Centered Management	.342	.041	.475	8.304	.000

Results of the regression coefficients presented in Table 10 show the estimates of Beta value and gives the contribution of the predictor in the model. The Beta value for teacher centered management (.475). This implies that an increase of 1 unit in teacher centered management will result in 0.475 units increase in academic performance. From the results in Table 10 the model can then be specified as:

$$Y = 2.405 + 0.342 X_2$$

4.3.3 Effect of Assessment Management Strategy on Academic Performance

The model summary of effect of assessment management strategy on academic performance is depicted in Table 11

Table 11: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.489 ^a	.336	.332	.60594

The model summary presented in Table 11 shows the coefficient of determination (R squared) of 0.336 indicating that the model explained only 33.6% of the total variation in the dependent variable

Table 12: ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.217	1	3.217	81.761	.003 ^b
	Residual	87.016	238	.367		
	Total	90.233	239			

Table 12 reveals that the F-value of 81.761 and a p-value of 0.000, which is significant at 5% level of confidence, indicate that the regression model is best fit; hence, Assessment Management Strategy was significant in predicting student academic performance of secondary schools in Nyamira County. In this regard, we reject the null hypothesis stating that there is no significant effect of assessment management strategy on academic performance of secondary schools in Nyamira County.

Table 13: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.729	.301		16.384	.000
	Assessment Management Strategy	.401	.078	.494	3.740	.000

Results of the regression coefficients presented in Table 13 show the estimates of Beta value and give the contribution of the predictor in the model. The Model shows the Beta value for assessment management strategy (.494). This implies that an increase of 1 unit in assessment management will result in 0.494 units increase in academic performance from the results in Table 13 the model can then be specified as:

$$Y = 3.729 + 0.401X_3$$

4.3.4 Effect of Teaching Management Strategies on Academic Performance

Regression analysis was conducted in order to predict the effect of teaching management strategies and students' academic performance. Multiple regression was computed at 95% confidence level (0.05 margin error) to show the multiple linear relationship. The model summary of the effect of teaching management strategies on academic performance is depicted in Table 14

Table 14: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.684 ^a	.535	.525	.54208

From results in Table 14, the R square showed that the effect of teaching management strategies and students ‘on students’ academic performance was $R^2=0.535$. These findings revealed that the independent variable; assessment management strategy, teacher centered management and student centered management predicts 53.5% on change in the dependent variable; academic performance of public secondary schools in manga sub county, Nyamira County. The study therefore concluded that the three independent variables explained 53.5% of academic performance in public secondary school, the remaining percentage 46.5 % is explained by other factors.

Table 15: ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	21.803	3	7.268	24.959	.000 ^b
	Residual	68.430	235	.291		
	Total	90.233	238			

The analysis of variance ANOVA was used to determine whether the data collected fit the regression model. It is showed in Table 15 that $F=24.959$, $p=0.00$. This showed that p value was less than 0.05 significance level indicating that the data fitted the regression model.

Table 16: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.583	.281		9.178	.000
	Student Centered Management	.218	.056	.236	3.893	.000
	Teacher Centered Management	.383	.052	.521	7.308	.000
	Assessment Management Strategy	.170	.0388	.194	4.38	.002

Results of the regression coefficients presented in Table 16 show the estimates of Beta value and give the contribution of the predictor in the model. The Model shows the Beta value for student centered management (.236), teacher centered management (.521) assessment management strategy (.194). This implies that an increase of 1 unit in assessment management will result in .236, .521 and 0.194 units increase in academic performance. From the results in Table 4.24 the model can then be specified as:

$$Y = 2.583 + .218X_1 + .383X_2 + .170X_3$$

4.4 Moderating role of Government Intervention on the Relationship between Teaching Management Strategies and Performance of Secondary Schools in Nyamira County, Kenya.

The model summary of the moderating role of government intervention on the relationship between teaching management strategies and performance is shown in Table 17.

Table 17: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.684 ^a	.535	.525	.54208
2	.779 ^b	.607	.596	.39114

From the model summary of multiple regression results, the results showed that all the three predictors (assessment management strategy, teacher centered management, student centered management) jointly explained 53.5% of the total variation in academic performance. This showed that considering the three study independent variables, there is a 53.5% ($R^2=0.535$) in predicting academic performance of schools in Manga sub-county without a moderator. However, with a moderator the variables jointly explained 60.7% ($R^2= 0.607$) variation in academic performance of schools. This implies that when schools embrace government intervention policies and proactively formulate them, then academic performance will likely improve.

Table 18: ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	21.803	3	7.268	24.959	.000 ^b
	Residual	68.430	235	.291		
	Total	90.233	238			
2	Regression	54.739	6	9.123	59.633	.000 ^c
	Residual	35.494	233	.153		
	Total	90.233	239			

Table 18 reveals that the F-value of 59.633 and a p-value of 0.00, which is significant at 5% level of confidence, indicate that the regression model is best fit; hence, the joint contribution of the independent variables was significant in predicting student academic performance and is likely to improve in the presence of a moderator. In this regard, there is moderating effect of government intervention on the relationship between teaching strategies and academic performance of secondary schools in Nyamira County.

Table 19: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.752	.295		9.325	.000
	Student Centered Management	.150	.074	.67	2.027	.007
	Teacher Centered Management	.401	.054	.556	7.373	.000
	Assessment Management Strategy	.185	.049	.170	3.776	.004
2	(Constant)	3.028	.214		14.120	.000
	Student Centered Management	.324	.300	.431	1.079	.282
	Teacher Centered Management	.964	.174	1.336	5.539	.000
	Assessment Management Strategy	.786	.337	.652	2.333	.001
	X1M	.133	.047	1.031	2.830	.006
	X2M	.317	.053	2.668	5.979	.000
	X3M	.271	.090	1.826	3.016	.003

Results of the regression coefficients presented in Table 19 show the estimates of Beta values and give the contribution of each predictor in the model with moderator. With government intervention as the moderator the Beta values for student centered management (1.031), teacher centered management (2.668) and assessment management strategy (1.826) were positive. The positive B values indicate the direction of relationship between predictors and outcome. From the results in Table 4.25 the model can then be specified as:

$$Y = 3.028 + .133X_1 + .317X_2 + .271X_3$$

5.0 CONCLUSIONS

The study concluded that joint teaching management strategies (assessment management strategy, teacher centered management and student-centered management) are significant in determining academic performance. The teaching management strategies (assessment management strategy, teacher centered management and student-centered management) predict 53.5% on change in the academic performance. It can be concluded that a unit increase in student centered management, teacher centered management and assessment management strategy increases academic performance positively.

The study concluded that student-centered management strategy and academic performance is positively and significantly related. This implied that an increase in the student-centered management strategy would also increase the students' academic performance. The most notable elements of student-centered management strategy included students' management and regulation of their behavior, giving students opportunities to develop clear classroom expectations, providing various learning activities to support students and promoting the positive teacher-student relationship.

The study concluded that teacher-centered management strategy and academic performance were positively and significantly related. Thus, an improvement in teacher centered management will

increase academic performance. The teacher centered management strategy includes teachers dominating the teaching of the students in the classroom, enabling the class assignments to be undertaken independently and silently by students and students actively involved in undertaking the tasks while listening to teacher's instruction. It also includes emphasizing mastery of learning and recall of the information while in the learning process.

A positive and significant relationship existed between assessment strategy and academic performance. Hence, an increase in assessment strategy would increase academic performance. The study concluded that continuous assessment tests reinforce students' learning of materials systematically. The study concluded that assessment strategy includes formative assessments, continuous assessment tests, summative assessment and integrating assessments.

The study concluded that government intervention moderated the academic performance of secondary schools in Nyamira County positively. The coefficient of determination increased significantly from 53.5% to 60.7% when student centered management strategy, teacher centered management strategy and assessment strategy interacted with government intervention. The government intervention includes setting the curriculum delivery policies and education standards that need to be followed in teaching. The intervention also includes regularly assessing the teaching management strategies used by teachers, setting targets to be achieved in each school and also rewarding the best performing school.

6.0 RECOMMENDATIONS

The study recommended that joint teaching management strategies (assessment management strategy, teacher centered management and student-centered management) should be adopted within the schools. The joint teaching management strategies (assessment management strategy, teacher centered management and student-centered management) were found to predict 53.5% on change in the academic performance. Having the joint teaching management strategies is critical to ensure that not only one strategy is relied upon despite its outcome.

The study recommended schools employ any of the three teaching management strategies. This is because they were positively and significantly related to academic performance. However, the assessment strategy had the highest effect on academic performance and should be the most applied within the schools. There should be continuous assessment tests to reinforce students' learning of materials in a systematic way. The schools need to have regular formative assessments and continuous assessment tests. Summative assessment should also be adopted within the schools and also there should be integrating assessments with teaching and learning.

The study recommended there should be students' management and regulation of their own behavior in schools. Students need to be given opportunities to develop clear classroom expectations and be provided with a variety of learning activities support. The study suggested that class assignments should, at some point, be undertaken independently and silently by students. Teachers need to emphasis more on mastery of learning and recall of information in the learning process by the students. The study recommended that the government need to set the curriculum delivery policies and every teacher needs to adhere to it. The government should also set the education standards that need to be followed in teaching. There should be regular assessments of the teaching management strategies used by teachers in the schools. The government should also set targets to be achieved in each school and the best performing school in the sub county needs to be rewarded. All the schools in the sub county need to embrace government intervention policies and proactively formulate them; then, academic performance will improve.

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