



**ACTIVELY ENGAGING STUDENTS AS CLASSROOM
MANAGEMENT PRACTICE AND ACADEMIC PERFORMANCE:
RESULTS FROM A STUDY OF PUBLIC SECONDARY
SCHOOLS IN SIAYA COUNTY, KENYA**

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Abstract:

Poor academic performance is a persistent problem in the education sector in Kenya and many countries around the world. Despite quality education being a global education goal, millions of children and adolescents attending school do not achieve minimum proficiency levels when they complete their school levels. Siaya County, like most counties in Kenya, has persistent below-average academic performance as indicated by the county's Kenya Certificate of Secondary Education (KCSE) exam mean scores of 4.123, 4.575 and 4.915 out of 12 points for the years 2020 to 2022. Siaya County has one of the highest student-teacher ratios in public secondary schools in Kenya. Available data of student-teacher ratios 40:1, 38:1 and 36:1 for the years 2016, 2019 and 2020 indicate, student-teacher ratio in the county's public secondary schools is the highest in its Nyanza Region and is above the UNESCO recommended ratio of 25:1. Research has demonstrated that class size has significant influence on senior secondary school's classroom discipline, engagement and communication. The persistent below-average academic performance calls into question the effectiveness of classroom management, given that the classroom is the primary context for implementing educational programs. The purpose of this study was to examine the influence of actively engaging students as a classroom management practice on academic performance in public secondary schools

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in Siaya County. Conceptual framework based on the concept of Simonsen *et al.* (2008) that classroom management founded on evidence-based practices is a critical input for successful teaching and learning was adopted. Descriptive survey and correlational designs were used. The study population comprised 465 English teachers, 635 mathematics teachers, 580 chemistry teachers and 247 deputy principals in 243 public secondary schools in Siaya County. The sample size of 112 schools was decided using a published table of sample size by Glenn Israel (1962). By stratified random sampling based on school categories, a sample of 112 schools consisting of 1 national school, 5 extra-county schools, 11 county schools and 95 sub-county schools was obtained. By purposive and simple random sampling techniques, one teacher each of the three subjects: English, mathematics and chemistry, was selected in each school, giving 112 teachers for each subject and a total of 336 classroom teachers. 112 deputy principals in the selected schools were included in the sample by purposive sampling, giving a total sample of 448 respondents. Data was collected using questionnaires and document analysis. Content validity of questionnaires was tested by the researcher's expert supervisors using Lawshe's content validity ratio. CVR of +1 ascertained validity. A pilot study was conducted in 11 schools outside the sample to determine the reliability of the instrument. Cronbach's alpha coefficient of 0.74 was obtained. Data was analyzed using frequency distribution tables, percentages, means, Pearson's "r" coefficient of correlation and regression analysis. The study found that specific classroom management practices for actively engaging students, including direct instruction, increasing opportunities to respond, guided notes, peer tutoring, use of response cards and computer-assisted instruction, were implemented in public secondary schools in Siaya County. However, implementation of the practices in public secondary schools was overall moderate (mean rating 1.86 on a scale of 0 - 3) and varied among the schools (mean ratings ranging from 1.0 to 2.5) and the specific practices. Direct instruction and opportunities to respond were frequently or very frequently used in daily classroom teaching in most (over 90 %) of the sampled schools. Guided notes and peer tutoring were frequently or very frequently used in the majority (over 50%) of the schools, while response cards and computer-assisted instruction were never or rarely used in the majority (over 50 %) of the public secondary schools. Actively engaging students as a classroom management practice had a moderate, positive and significant influence on academic performance [$r(93) = .314, p = 0.002$] and accounted for 8.9% variation in academic performance (adjusted R square = .089). It was a significant predictor of academic performance $F(1, 91) = 9.949, p < .05$). For every one unit increase in implementation of actively engaging students, there was a 1.259 increase in academic performance. The findings are significant to classroom teachers in deciding appropriate applications of classroom management practices in the enhancement of academic performance in Siaya County.

Keywords: actively engaging students, classroom management, academic performance

1. Introduction

Poor academic performance is a persistent problem in the education sector in Kenya and many countries around the world. Despite quality education being a global education goal, millions of children and adolescents attending school do not achieve minimum proficiency levels when they complete their school levels. UNESCO Institute for Statistics ([UIS], 2017) reports that 387 million children of primary school age and 230 million adolescents of lower secondary school age are not achieving minimum proficiency levels in reading and mathematics globally. Of these cases, 68 per cent and about 60 per cent, respectively, are in school but will not achieve minimum proficiency levels when they complete their school levels (UIS, 2017). Three regions have the highest rates of children and adolescents in school, but are not learning successfully. The regions include Sub-Saharan Africa, Central and Southern Asia, Western Asia and Northern Africa (UIS, 2017).

Quality education is largely recognized through student academic performance. Academic performance refers to a measure of student learning as an outcome of educational experiences. It is a measure of attainment of learning objectives and acquisition of desired skills and competencies (York, Gibson & Rankin, 2015).

Research has shown that quality education is determined by several variables. Such variables include: the curriculum, instructional materials, physical infrastructure, teacher training and competences and school management (Osakwe, 2014). Other factors contributing to quality learning outcomes are student factors such as students' previous educational outcomes, socio-economic status of parents, parents' educational background, and student self-effort and self-motivation (Mwangi, 2015; Sunday-Piaro, 2018).

Measures have been implemented in various countries to improve the quality of education. For example, Education for All (EFA) Global Monitoring Report 2013/2014 highlights progress in education quality parameters such as pupil-teacher ratio, the proportion of trained teachers, the number of female teachers, availability of learning materials, and school infrastructure. While all these are valid endeavour towards quality education, the over 370 million children and adolescents in school but not learning successfully (UIS, 2017) attest to the fact that the interventions have yielded little success in improving academic performance in many countries.

In Kenya, the government provides trained teachers, course books, tuition fund, and maintenance and infrastructure fund. However, these initiatives have not helped much to produce quality academic performance. About 70% of candidates who sit for the KCSE exams score below average mean grades of C- and below, each year since 2016 (Ministry of Education, 2019). The persisting situation indicates that a gap exists that requires more to be done, especially at the classroom level, where actual implementation of educational programmes occurs. Effective classroom management is, therefore, a skill set required by every classroom teacher facilitating student learning.

Considerable research exists highlighting numerous evidence-based specific practices associated with effective classroom management. Much of the findings have been consolidated into basic components of effective classroom management by different authors, yielding a number of theoretical models of classroom management.

Evertson and Weinstein (2006), in defining classroom management as actions teachers take to create an environment that facilitates both academic and social-emotional learning, distinguish five types of teacher actions that constitute high-quality classroom management. The actions include: develop caring, supportive relationships with and among students; organize and implement instruction in ways that optimize students' access to learning; encourage students' engagement in academic tasks; promote the development of students' social skills and self-regulation; and use appropriate interventions to assist students with behavior problems. Oliver and Reschly (2007) define classroom management as classroom organization and students' behaviour management. The authors distinguish six essential components of classroom management, including: structured environment, actively supervising student engagement, school-wide behaviour expectations, implementing classroom rules and routines, encouragement of appropriate behaviour, and use of behaviour reduction strategies.

Simonsen *et al.* (2008) in a meta-analysis of studies on classroom management published between 1969 and 2007 identified 20 evidence-based specific practices for use in general classroom management. Each practice was deemed to be evidence-based if it had been evaluated using sound experimental design and methodology, had been shown to be effective, and was supported by at least three studies published in peer-refereed journals (Simonsen *et al.*, 2008). The researchers analyzed the evidence-based practices into five empirically supported critical features of classroom management, namely: maximizing structure; posting, teaching, reviewing, monitoring and reinforcing behaviour expectations; actively engaging students; using a continuum of strategies for acknowledging appropriate behaviour and using a continuum of strategies for responding to inappropriate behaviour.

It is noticeable from the literature on classroom management that authors largely agree on essential components of classroom management. Simonsen *et al.* (2008) from a meta-analysis of studies provide a useful update of evidence-based specific classroom management practices, which they analyzed into five basic components of effective classroom management. The basic components of classroom management by Simonsen *et al.* (2008) agree with and encompass the evidence-based basic features of classroom management proposed by other researchers, such as Evertson and Weinstein (2006) and Oliver and Reschly (2007).

Instruction and classroom management have often been cited as key teaching tasks and have been shown to be interdependent. A study by Hepburn *et al.* (2020) found that instructional practices were one of the most commonly used sets of practices to prevent unproductive classroom behavior. OECD's (2009) teaching and learning international survey found that teachers who more often summarize the previous lesson, state learning

goals and check student understanding also report a better learning atmosphere, less noise and fewer distractions, which lead to better learning outcomes. Brophy (1982) argues that because successful classroom managers maximize the time their students spend engaged in academic tasks, they also maximize their students' opportunities to learn academic content and this shows up in superior performance in achievement tests.

This paper draws on findings from a descriptive survey and correlational study that investigated the influence of the implementation of classroom management practices on academic performance in public secondary schools in Siaya County. Its focus relates to one of the objectives in the larger study that examined the influence of actively engaging students on academic performance in the context of public secondary schools in Siaya County.

Engagement refers to how students participate during classroom instruction. It is comprised of passive behaviours such as listening to a teacher and active behaviors like writing, answering questions, group work, and role plays (Simonsen *et al.*, 2008). Actively engaging students as a component of classroom management is a preventative approach which involves using strategies related to lesson organization and delivery that focus on engaging students (Hepburn, 2020). If students are actively engaged in instruction, then it is difficult to engage in incompatible behaviors (Simonsen *et al.*, 2008). Simonsen *et al.* (2008), from a meta-analysis study, provide several evidence-based specific classroom management practices that define active engagement of students. The practices include increasing opportunities to respond through different instructional strategies, direct instruction, peer tutoring, guided notes and computer-assisted instruction.

An opportunity to respond refers to teacher behaviour that prompts or solicits student response, such as asking questions or presenting a demand. Two common methods used to increase opportunities to respond in the classroom include choral responding and the use of response cards. In choral responding, students answer a question in unison, while the use of response cards involves all students writing their answers to a question on a small erasable board, and then hold it up for the teacher to see. Direct instruction involves the teacher first modeling the content, then leading students through the content, and finally testing students' knowledge of the presented content. In peer tutoring, students are paired and assigned the roles of tutor and tutee. Students provide each other with instruction and give each other immediate error corrections. The classroom teacher moves around the classroom and assists student pairs in need of additional help. Computer-assisted instruction uses technology to give students the benefit of one-on-one instruction within the classroom. The benefits include materials tailored to the student's learning level, frequent opportunities to respond and immediate error correction. In guided notes, the teacher provides outlines of a lesson or chapter that contain main ideas with blanks for students to fill in during the lesson (Simonsen *et al.*, 2008).

While these individual practices for student engagement have shown sufficient evidence for classroom adoption, their influence on academic performance as a package of practices defining a component of classroom management has not been investigated.

Examining the influence of actively engaging students as a component of classroom management will contribute to a better understanding of the relationship between classroom management and academic performance.

2. Methodology

2.1 Research Design

The study employed descriptive survey and correlational designs. A descriptive survey provides a quantitative description of trends in attitudes, opinions or behavior of a population by studying a sample of that population (Cohen, Monion & Mornson, 2007). Descriptive survey was appropriate for examining and describing trends in teachers' classroom management behavior regarding frequency of use in daily classroom teaching of classroom management practices for actively engaging students. Correlational research involves collecting quantitative data in order to determine whether and to what degree a relationship exists between two or more variables (Mugenda & Mugemda, 1999). The design was appropriate for examining the relationship between independent and dependent variables in this study.

2.2 Area of Study

The study was conducted in Siaya County, which is one of the six counties of the Nyanza region. The county has a land surface area of approximately 2,530 km² and a water surface area of approximately 1,005 km². Siaya County is bordered by Busia County to the North West, Vihiga and Kakamega counties to the North East, Kisumu County to the South East, and Homa Bay across Winam Gulf to the South. It approximately lies between latitudes 0° 26' South to 0° 18' North and longitudes 33° 58' and 34° 33' East.

Siaya County has one of the highest student-teacher ratios in public secondary schools in Kenya. Available data of student-teacher ratios 40:1, 38:1 and 36:1 for the years 2016, 2019 and 2020 indicate, student-teacher ratio in the county's public secondary schools is the highest in its Nyanza Region and is above the UNESCO recommended ratio of 25:1. Siaya County, like most counties in Kenya, has persistently had below average academic performance. A study by Ajayi, Audu and Ajayi (2017) demonstrated that class size has a significant influence on senior secondary schools' classroom discipline, engagement and communication. It was therefore necessary to establish a relationship between classroom management practices for actively engaging students and academic performance, with a view to understanding academic performance vis-à-vis the circumstances in Siaya County.

2.3 Study Population

The study population comprised all of the 465 English teachers, 635 mathematics teachers, 580 chemistry teachers and 247 deputy principals in the 243 public secondary schools in Siaya County.

2.4 Sample and Sampling Techniques

This study was to examine the influence of actively engaging students as a classroom management practice on academic performance in public secondary schools in Siaya County. The study therefore used the school as the primary sampling unit, given that KCSE mean scores used as a measure of academic performance were for the schools.

Using a published table of sample size by Glenn Israel ($\pm 7\%$ precision, 95% confidence level and $p = .5$), a sample size of 112 schools from the population of 243 public secondary schools was decided. According to Israel (1992), one of the ways to determine sample size is to rely on published tables that provide the sample size for a given set of criteria.

Stratified random sampling was then conducted based on categories of public secondary schools to obtain a sample of 112 schools that were representative of the population of public secondary schools in Siaya County. The researcher divided the population of each category of public secondary schools by the total population of public secondary schools (243) in the county and multiplied it by 112, which was the total sample size needed for the study. This gave a sample consisting of 1 national school, 5 extra-county schools, 11 county schools and 95 sub-county schools, out of the category populations of 2, 10, 23 and 208, respectively. Stratified sampling involves identifying sub-groups in the study population and their proportions and randomly selecting subjects from each sub-group to form the sample. According to Oso and Onen (2005), stratified random sampling ensures equitable representation of the population in the sample and accounts for the differences in sub-group characteristics. In this study, stratified random sampling ensured that the different school situations in which classroom management takes place with regard to the category were taken into account in the sample.

By purposive and simple random sampling techniques, one teacher each of the three subjects, English, mathematics and chemistry, was selected in each school, giving 112 teachers for each subject and a total of 336 classroom teachers as respondents. Three subjects were purposively chosen to make the study more manageable and because the three subjects contribute more to the overall KCSE results of a school, as they are taken by most students. A purposive sample is chosen for a specific purpose (Cohen *et al.*, 2007). Purposive sampling was appropriate in this study for choosing subjects on which to base the selection of respondents in a manner that could meet the purpose of the study. Simple random sampling was applicable in this study to ensure each teacher of each of the three chosen subjects in a school had an independent chance of being selected into the sample (Oso & Onen, 2005). Applying purposive sampling, 112 deputy principals in all the selected schools were included in the sample, giving the final sample size of 448 for respondents.

2.5 Instruments of Data Collection

The researcher used Teachers' Questionnaire, Deputy Principals Questionnaire and document analysis guide. Teachers' Questionnaire and Deputy Principals' Questionnaire

were used to measure the implementation of classroom management practices. By document analysis, data on KCSE 2022 results for each of the selected schools were obtained from the Siaya County Director of Education's Office document of KCSE. The scores were used as a measure of academic performance.

Both the Teachers' Questionnaire and the Deputy Principals' Questionnaire were obtained by adapting the classroom management checklist originally designed by Simonsen *et al.* (2008). These researchers identified 20 evidence-based classroom management practices that are generally applicable in all classrooms and grouped them into five basic features of effective classroom management. The survey items relating to the objective reported in this paper included six evidence-based classroom management practices identified by Simonsen *et al.* and required classroom teachers to rate the practices by frequency of use in their daily classroom teaching. The rating was done on a Likert scale of 0 to 3 (0 = Never used, 1 = Rarely used, 2 = Frequently used, 3 = Very frequently used). The Deputy Principals Questionnaire measured implementation of classroom management practices as rated by the observer. The Code of Regulations for Teachers (2015) gives a greater responsibility for appraisal of teachers every school term to the deputy principals and requires them to conduct lesson observation of each teacher at least once a term. The termly lesson observation provides a good opportunity for collecting data on classroom management by observation method using deputy principals as participant observers rather than a one-off lesson observation by a visiting researcher that may be less reliable (Bell & Waters, 2014).

Reliability of questionnaires was ascertained with Cronbach's alpha coefficient of 0.74 for teachers' questionnaire from a pilot study conducted in 11 (10 %) schools outside the sample. The Deputy Principals' Questionnaire had the same content as the Teachers' Questionnaire since the deputy principals were to rate classroom teachers' implementation of the practices from the observer's point of view. The same reliability as that of the teacher's questionnaire was applied. Content validity of the instruments was ascertained with a CVR of +1 by the researcher's expert supervisors using Lawshe's content validity ratio. Validity of document analysis was presumed given the authenticity and credibility of the documents as the official national examination results for the schools from the Kenya National Examination Council (KNEC). KNEC produces official examination results annually for each school that served as an examination center. The County Director of Education Offices compile and analyze KNEC examination results for schools in the counties to provide information about academic performance in the counties, which can be a useful source of data for research purposes.

Return rates of 78.3% and 82.1% for teachers and deputy principals, respectively, were realized, giving a total of 263 classroom teachers and 92 deputy principals out of the sample expectations of 336 classroom teachers and 112 deputy principals. The total for classroom teachers included 83 English teachers, 88 mathematics teachers and 92 chemistry teachers.

2.6 Data Analysis Procedure

The filled-in questionnaires were collected and audited by the researcher for completeness and consistency with the instructions. The quantitative data on the implementation of classroom management practices in each of the participating schools were summarized on an Excel spreadsheet for statistical analysis. The statistical methods used to analyze the data collected were means, frequency distribution and percentages, Pearson's coefficient of correlation and regression analysis.

Summary of data involved first determining school ratings for frequency of use in daily classroom teaching of evidence-based specific classroom management practices, under actively engaging students as a basic component of classroom management. School ratings were obtained by averaging ratings by three classroom teachers and the deputy principal in each of the sampled schools, which was then recorded for each school as a whole number based on the scale of 0 to 3. From this summary of responses, other critical information for analysis was then determined, including: mean ratings for implementation of specific classroom management practices in the sampled schools and school mean ratings for implementation of specific classroom management practices for actively engaging students.

3. Results

The primary purpose of this study was to examine the influence of actively engaging students as a classroom management strategy on academic performance in public secondary schools in Siaya County. To achieve this purpose, the researcher first examined the implementation of evidence-based classroom management practices under actively engaging students, after which the relationship between actively engaging students as a component of classroom management and academic performance was determined. Figure 1 presents the frequency of use of specific classroom management practices for actively engaging students in daily classroom teaching in the sampled public secondary schools.

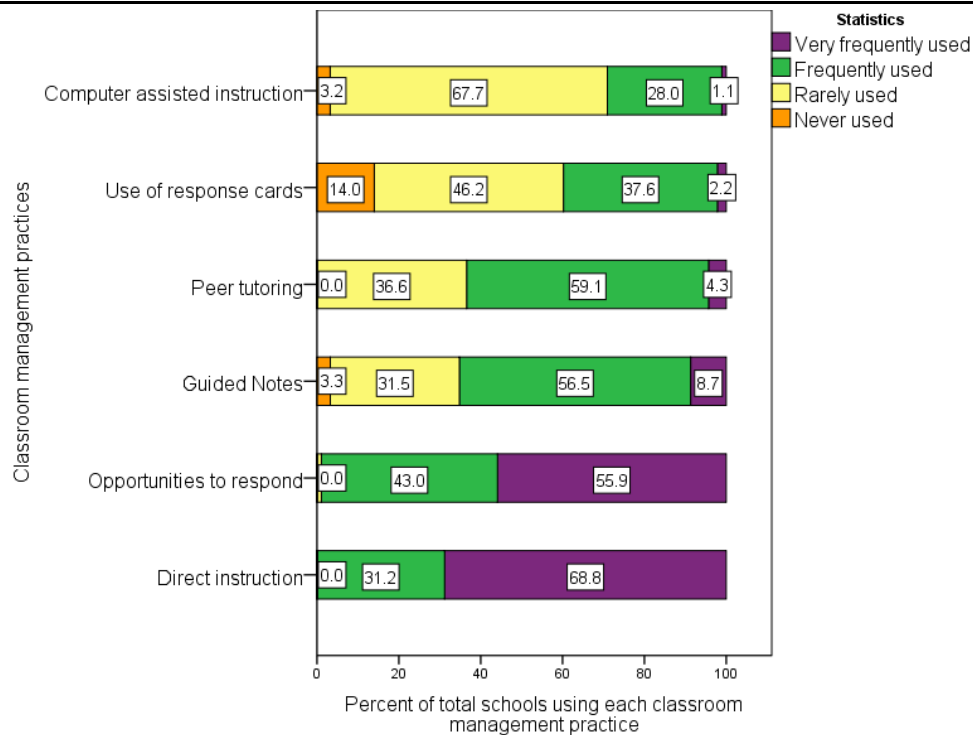


Figure 1: Frequency of use of classroom management practices for actively engaging students in daily classroom teaching in the sampled public secondary schools (n = 93)

From Figure 1, it can be observed that direct instruction was either frequently or very frequently used in daily classroom teaching in all of the 93 sampled public secondary schools in Siaya County. It was frequently used in 31.2% and very frequently used in 68.8% of the schools. Increasing opportunities to respond were frequently or very frequently used in daily classroom teaching in 92 (98.9 %) of the public secondary schools and rarely used in 1 (1.1 %) school.

Two of the classroom management practices for actively engaging students had the majority of the schools reporting higher frequencies of use (Frequently used and Very Frequently used), with a significant portion reporting lower frequencies (Never used and Rarely used) of use in daily classroom teaching. The practices are: guided notes (Never used 3.3 %, Rarely used 31.5 %, Frequently used 56.5%, Very Frequently used 8.7%), and peer tutoring (Rarely used 36.6 %, Frequently used 59.1 %, Very Frequently used 4.3 %). It was also observed that two of the specific classroom management practices actively engaging students were never used or rarely used in the majority (more than 50%) of the sampled public secondary schools in Siaya County. A smaller percentage of the schools had the practices frequently or very frequently used in daily classroom teaching. These classroom management practices; use of response cards (Never used 14.0%, Rarely used 46.2%, Frequently used 37.6%, Very Frequently used 2.2%), and computer-assisted instruction (Never used 3.2%, Rarely used 67.7%, Frequently used 28.0%, Very Frequently used 1.1%).

To obtain data for linear correlation and regression analyses of the influence of actively engaging students on academic performance, school mean ratings for the

implementation of classroom management practices under this component of classroom management were determined. Table 1 shows school mean ratings for the implementation of specific classroom management practices for actively engaging students.

Table 1: School mean ratings for the implementation of specific classroom management practices for actively engaging students (n = 93)

School S/N	Mean Rating	School S/N	Mean Rating	School S/N	Mean Rating	School S/N	Mean Rating
1	2	29	2.33	57	1.83	85	1.5
2	2.17	30	1.67	58	2.17	86	1.17
3	1.83	31	1.5	59	1.83	87	1.83
4	1.33	32	2.33	60	1.67	88	2
5	1.67	33	1.833	61	2.17	89	2
6	1.83	34	1.67	62	2.33	90	1.83
7	2.17	35	2.5	63	1.83	91	2.17
8	2	36	2	64	2	92	2.17
9	1.5	37	2.17	65	1.833	93	1.83
10	2	38	2.17	66	1.33		
11	1.5	39	1.83	67	1.83		
12	1.8	40	1.67	68	2		
13	1.67	41	2	69	2.5		
14	2.17	42	1.5	70	1.83		
15	1.5	43	2.33	71	1.83		
16	2.33	44	1.5	72	1.67		
17	1.83	45	1.5	73	1.83		
18	1.67	46	2.33	74	2		
19	1.67	47	1.833	75	2.5		
20	2.17	48	2	76	2.17		
21	1.83	49	1.33	77	1.67		
22	1.83	50	1.33	78	2		
23	1.83	51	2	79	1.83		
24	1.83	52	1.83	80	2.17		
25	1.83	53	1.67	81	1.5		
26	1.67	54	1.67	82	1.33		
27	2.17	55	1.33	83	1.83		
28 Overall mean	2.17	56	1	84	2.33		1.86

From Table 1, it can be observed that implementation of classroom management practices in the sampled public secondary schools varied among the schools, as indicated by mean ratings ranging from 1.0 to 2.5. Overall mean rating for implementation of the classroom management practices for actively engaging students in the sampled public secondary schools was 1.86.

KCSE 2022 exam mean scores for the sampled schools obtained by document analysis were analyzed in a summary table as a measure of the schools' academic

performance. Academic performance in this analysis refers to the mean scores the schools achieved in KCSE 2022 under the instruction of the English, mathematics and chemistry teachers who were the respondents in this study. Table 2 presents academic performance for the sampled public secondary schools in Siaya County.

Table 2: Academic performance in the sampled public secondary schools in Siaya County (Grading scale 1 -12)

School S/N	Mean Score	School S/N	Mean Score	School S/N	Mean Score	School S/N	Mean Score
1	7.5	29	5.07	57	5.52	85	3.95
2	5.8	30	3.23	58	3.75	86	3.3
3	2.62	31	4.85	59	3.35	87	2.65
4	3.51	32	4.77	60	4.12	88	3.36
5	3.44	33	5.34	61	3.06	89	2.97
6	3.37	34	3.22	62	3.27	90	2.61
7	3.72	35	4.2	63	4.14	91	3.22
8	3.27	36	4.11	64	3.56	92	2.85
9	3.94	37	5.08	65	6.22	93	3.45
10	2.83	38	3.31	66	3.24		
11	3.23	39	5.81	67	7.51		
12	3.44	40	2.11	68	2.83		
13	3.81	41	2.24	69	5.78		
14	3.15	42	4.76	70	5.73		
15	3.89	43	6.03	71	3.7		
16	3.89	44	3.22	72	3.71		
17	3.13	45	4.67	73	4.67		
18	4.17	46	3.46	74	5.08		
19	2.91	47	3.09	75	7.76		
20	5.05	48	5.01	76	6.35		
21	3.83	49	3.33	77	4.54		
22	4.55	50	3.4	78	4.24		
23	3.1	51	4.16	79	3.9		
24	4.04	52	3.89	80	3.48		
25	2.82	53	4.82	81	2.21		
26	2	54	4.41	82	3.58		
27	8.22	55	3.73	83	3.77		
28	5.53	56	2.69	84	3.4		

From the table, it can be observed that academic performance varied among the sampled public secondary schools, with mean scores ranging from 2.00 to 8.22.

Analysis was then conducted to test the null hypothesis that there is no relationship between actively engaging students and academic performance. In testing the null hypothesis, Pearson's r' correlation coefficient was computed to determine the relationship between school mean ratings for implementation of specific classroom management practices under actively engaging students and KCSE mean scores. Results were as presented in Table 3.

Table 3: Relationship between actively engaging students and academic performance

		Actively engaging students	Academic performance
Actively engaging students	Pearson Correlation	1	.314**
	Sig. (2-tailed)		.002
	n	93	93
Academic performance	Pearson Correlation	.314**	1
	Sig. (2-tailed)	.002	
	n	93	93
**. Correlation is significant at the 0.01 level (2-tailed).			

Results in Table 3 indicate that there was a moderate, positive relationship between actively engaging students and academic performance. The relationship was statistically significant as the calculated p-value was 0.002, which was less than the set critical value of 0.05. Based on the results, there was sufficient evidence to reject the null hypothesis, and it was therefore rejected. The Pearson's r -value of 0.314 indicates that actively engaging students had a positive influence on academic performance. To determine the actual influence of actively engaging students on academic performance, regression analysis was done. Table 4 shows the results.

Table 4: Regression analysis of the influence of actively engaging students in academic performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.314 ^a	.099	.089	1.19322
a. Predictors: (Constant), Actively engaging students				

From Table 4, actively engaging students accounted for 8.9% (Adjusted R square = .089) of public secondary schools' academic performance in Siaya County. Analysis of variance to determine whether this variable was a significant predictor of academic performance in public secondary schools produced results in Table 5.

Table 5: Analysis of variance on the influence of actively engaging students in academic performance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14.166	1	14.166	9.949	.002 ^b
	Residual	129.563	91	1.424		
	Total	143.728	92			
a. Dependent Variable: Academic performance						
b. Predictors: (Constant), Actively engaging students						

From the table it can be observed that actively engaging students was a significant predictor of academic performance in public secondary school in Siaya County $F(1, 91) = 9.949, p < .05$). Since actively engaging students was found to be a significant predictor of academic performance, there was need to compute linear regression analysis to establish this influence. Table 6 shows the results.

Table 6: Linear analysis of influence of actively engaging students on academic performance

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.695	.753		2.251	.027
	Actively engaging students	1.259	.399	.314	3.154	.002

a. Dependent Variable: Academic performance

Table 6 indicates that for every one-unit increase in implementation of classroom management practices for actively engaging students, there was a 1.259 increase in academic performance.

4. Discussion

This study found that the six specific classroom management practices for actively engaging students examined in this study were used in daily classroom teaching in public secondary schools in Siaya County. The specific classroom management practices implemented include: direct instruction, increasing opportunities to respond, guided notes, peer tutoring, use of response cards and computer-assisted instruction. Given the emphasis on the importance of actively engaging students among Kenyan secondary school teachers, it could be expected that teachers would report the use of practices for actively engaging students in daily classroom teaching. A study by Chumba and Kiprop (2014) on teacher preparation in public universities in Kenya found that the training was comprehensive in content and pedagogy, which made the teachers confident in class. Jepketer *et al.* (2015) investigated teachers' classroom strategies for enhancing students' performance in public secondary schools in Nandi County, Kenya, and identified teaching strategies as one of the approaches adopted by teachers. The finding also agrees with the results of a meta-analysis by Simonsen *et al.* (2008), which identified these practices among twenty evidence-based specific classroom management practices that can be applied with all students in classrooms.

While the finding that teachers reported using all the evidence-based practices in daily classroom teaching in Siaya County may look encouraging, a deeper look at the variation in implementation reveals interesting information. Direct instruction was used frequently or very frequently in daily classroom teaching in all the sampled public secondary schools, reflecting teachers who tend to be subject experts, consistent with the reported secondary schools' teachers' training in Kenya, but it may also reflect a more teacher-centered approach. It was observed that increasing opportunities to respond were used frequently or very frequently in 98.9% of the schools, suggesting teachers' awareness of the importance of involving students. However, implementation of specific strategies for involving students, such as guided notes, peer tutoring, use of response cards or computer-assisted instruction was either moderate or low, suggesting lower student students' participation.

This study found that actively engaging students had a moderate, positive and significant influence on academic performance [$r(93) = .314, p = 0.002$]. It accounted for 8.9% of public secondary schools' academic performance in Siaya County, as shown by the adjusted R-squared coefficient of .089. It was a significant predictor of academic performance $F(1, 91) = 9.949, p < .05$. For every one unit increase in implementation of actively engaging students, there was a 1.259 increase in academic performance.

Studies have shown that good instruction is an effective preventative approach to students' classroom behaviour management. A study by Hepburn *et al.* (2020) found that instructional practices were one of the most commonly used sets of practices to prevent unproductive classroom behavior. OECD's (2009) teaching and learning international survey found that teachers who more often summarize the previous lesson, state learning goals and check student understanding also report a better learning atmosphere, less noise and fewer distractions, which lead to better learning outcomes. Brophy (1982) argues that because successful classroom managers maximize the time their students spend engaged in academic tasks, they also maximize their students' opportunities to learn academic content, and this shows up in superior performance in achievement tests. Other studies have highlighted instructional practices as a proactive approach to classroom behaviour management. The present study's finding that actively engaging students as a component of classroom management had a positive and significant influence on academic performance demonstrates the effectiveness of this component of classroom management in enhancing academic performance. The finding is consistent with the results of a case study by Hakizimana (2016) of classroom management and students' academic performance using five schools in a district in Rwanda, where there was a significant positive relationship between instructional management and academic performance.

Globally, the classroom practice experiences a shift in instructional approach from the traditional teacher-centered approach, where the learner is a passive recipient of knowledge, to learner-centered approach that fosters the development of 21st-century skills. In the modern approach, the learner plays an active role through asking questions, completing tasks independently, group work and role plays, while the teacher employs an interactionist approach to classroom management.

The result of this present study identifies actively engaging students as a classroom management practice that has a statistically significant influence on academic performance in public secondary schools in Siaya County. However, the study also found that implementation of classroom management practices under this component of classroom management was moderate, as indicated by the overall mean rating of implementation of 1.86 on a rating scale of 1-3. Computer-assisted instruction had the lowest implementation with teachers in 70.9% of public secondary schools reporting they never or rarely used this practice in daily classroom teaching. The moderate implementation of active engagement of students and the low integration of technology in classroom instruction in public secondary schools in the county may not bring out the best impact of this component of classroom management on academic performance.

5. Conclusion

Specific classroom management practices for actively engaging students, including direct instruction, increasing opportunities to respond, guided notes, peer tutoring, use of response cards and computer-assisted instruction, were implemented in public secondary schools in Siaya County. However, implementation of the practices in public secondary schools was overall moderate and varied among the schools and the specific practices. Actively engaging students as a classroom management practice had a moderate, positive and significant influence on academic performance [$r(93) = .314$, $p = 0.002$] and accounted for 8.9% variation in academic performance (adjusted R square = .089). It was a significant predictor of academic performance $F(1, 91) = 9.949$, $p < .05$). For every one unit increase in implementation of actively engaging students, there was a 1.259 increase in academic performance.

Conflict of Interest Statement

This is one of the papers that draw from a descriptive survey and correlational study that investigated the influence of implementation of classroom management practices on academic performance in public secondary schools in Siaya County, Kenya. The study was conducted, and papers were written for publication in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Educational Administration at Maseno University, Kenya. To the best of the authors' knowledge, there is no financial or non-financial conflict of interest that could impact the research and its publication.

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References

- Ajayi, O. V., Audu, C. T. & Ajayi, E. E. (2017). Influence of class size on students' classroom discipline, engagement and communication: A case study of senior secondary schools in Ekiti State, Nigeria. *Sky Journal of Educational Research*, 5(5), 034-041. Retrieved from <https://osf.io/sxpwk/download>
- Ayre, C. & Scally, A. J. (2014). Critical values for Lawshe's content validity ratio: Revisiting the original methods of calculation. *Measurement and Evaluation in Counseling Development* 2014, 47(1) 79-86. <https://doi.org/10.1177/0748175613513808>
- Brophy, J. (1982). *Classroom management and organization*. Michigan: The Institute for Research on Teaching, Michigan State University. Retrieved from <https://edwp.educ.msu.edu/research/wp-content/uploads/sites/10/2020/11/op054.pdf>
- Chumba, S. & Kiprop, C. (2014). Teacher preparation in public universities in Kenya: Challenges and mitigation. *International Journal of Education and Research*, 2(6). Retrieved from <https://ijern.com/journal/June-2014/10.pdf>
- Cohen, L., Manion, L., & Morrison, K. (2007). *Research methods in education*. Routledge 2 Park Square Publishers: London. Retrieved from <https://doi.org/10.4324/9780203029053>
- Connelly, L. M. (2008). Pilot studies. *Medsurg Nursing*, 17(6). 411-2. Retrieved from <https://pubmed.ncbi.nlm.nih.gov/19248407/>
- Evertson, C. M., & Weinstein, C. S. (Eds) (2006). *Handbook of classroom management: Research, practices and contemporary issues*. Mahwah, NJ: Routledge. <https://doi.org/10.4324/9780203874783>
- Hakizimana, E. (2016). Classroom management and students' academic performance in secondary schools in Nyamagabe District, Rwanda. (unpublished master's thesis). Mount Kenya University. Retrieved from https://opac.mku.ac.ke/cgi-bin/koha/opac-detail.pl?biblionumber=80809&shelfbrowse_itemnumber=105150
- Hepburn, L., Beamish, W. & Alston-Knox, C. L. (2020). Classroom management practices commonly used by secondary school teachers: Results from Queensland survey. *The Australian Educational Researcher*, (2021), 48:485-505. Retrieved from <https://link.springer.com/article/10.1007/s13384-020-00402-y>
- Herman, K. C., Reinke, W. M., Dong, N. & Brandshaw, C. P. (2020). Can effective classroom behavior management increase student achievement in middle school? Findings from a group randomized trial. <https://dx.doi.org/10.1037/edu0000641>
- Iqbal, A., Reuf, M., Alan, Z., Shafiqur, R., Wajid, K. Aqila, R. & Farman, A. (2012). Teachers' perception of classroom management, problems and solutions: Case of government secondary schools in Chitral, Khyber Pakhtunkhwa, Pakistan. *International Journal of Business and Social Sciences* 3(24). Retrieved from [https://www.ijbssnet.com/journals/Vol 3 No 24 Special Issue December 2012/18.pdf](https://www.ijbssnet.com/journals/Vol%203%20No%2024%20Special%20Issue%20December%202012/18.pdf)

- Israel, G. D. (1992). Sampling the Evidence of Extension Program Impact, Program Evaluation and Organizational Development. IFAS, University of Florida. Retrieved from <https://edis.ifas.ufl.edu/publication/PD005>
- Jepketer, A., Kombo, K. & Kyalo, N.D. (2015). Teachers' classroom strategies for enhancing students' performance in public secondary schools in Nandi County, Kenya. *IOSR Journal of Humanities and Social Science (IOSR- JHSS)*, 20(7), 61-73. Retrieved from <https://ir-library.ku.ac.ke/items/08c2e884-c7ca-4663-a6ee-b4691ad97da4>
- Kaur, S. & Pahuja, J. (2019). Best classroom management practices. *International Journal for Research Trends and Innovation*, 4(4), 2456-3315. Retrieved from <https://www.ijrti.org/papers/IJRTI1904018.pdf>
- Kenya National Bureau of Statistics (2019). 2019 Kenya population and housing census Volume 1: Population by county and sub-county, Nairobi.
- Kyriacou, C. (2007). *Essential teaching skills*. 3rd Ed. Nelson Thomas Ltd. Deltaplace. United Kingdom. Retrieved from <http://dspace.khazar.org/bitstream/20.500.12323/4235/1/Essential%20Teaching%20Skills%2C%20Third%20Edition%20by%20Chris%20Kyriacou%20%28z-lib.org%29.pdf>
- Mathers, N., Fox, N. & Hunn, A. (2007). Surveys and Questionnaires. The NIHR RDS for the East Midlands/Yorkshire & Humber. Retrieved from https://www.researchgate.net/profile/Nick-Fox/publication/270684903_Surveys_and_Questionnaires/links/5b38a877aca2720785fe0620/Surveys-and-Questionnaires.pdf
- Marzano, R. J., & Marzano, J. S. & Pickering, D. J. (2003). *Classroom management that works, research-based for every teacher*. Alexandria, VA: Association of Supervision and Curriculum Development (ASCD). Retrieved from https://files.ascd.org/staticfiles/ascd/pdf/siteASCD/video/Classroom_Management_that_Works.pdf
- Ministry of Education (2019). Basic education statistical booklet 2019, Nairobi: Ministry of Education.
- Ministry of Education (2020). Basic education statistical booklet 2020, Nairobi: Ministry of Education
- Ministry of Education (2019). National Education Sector Strategic Plan for the Period 2018 – 2022, Nairobi: Ministry of Education.
- Mitchell, B. S., Hirn, R. G. & Lewis, T. J. (2017). Enhancing effective classroom management in schools: Structures for changing teacher behavior. *Teacher Education and Special Education*, 40(2), 140-153. Retrieved from <https://files.eric.ed.gov/fulltext/EJ1137898.pdf>
- Mogalakwe, M. (2006). The use of documentary research methods in social research. *African Sociological Review*. 10(1), 221-230. Retrieved from <https://www.jstor.org/stable/afrisocirevi.10.1.221>

- Mugenda, O. N., & Mugenda, A. G. (2009). *Research methods: A quantitative and qualitative approach*. Nairobi: ACTS Press
- Mwangi, P. M. (2015). Administrative factors influencing students' performance in Kenya certificate of secondary education in public secondary schools in Thika West District, Kenya. (unpublished master's thesis). University of Nairobi, Kenya. Retrieved from https://erepository.uonbi.ac.ke/bitstream/handle/11295/95086/Mwangi_Administrative%20Factors%20Influencing%20Students%20Performance%20In%20Kenya%20Certificate%20Of%20Secondary%20Education%20In%20Public%20Day%20Secondary%20Schools%20In%20Thika%20West%20District,%20Kenya.pdf;sequence=1
- Nisar, M., Khan, I. A. & Khan, F. (2019). Relationship between classroom management and student academic achievement, *Pakistan Journal of Distance and Online Learning*, Volume 1.
- OECD (2009). Creating effective teaching and learning environment: First results from TALIS, OECD Publishing. Retrieved from https://www.oecd.org/en/publications/creating-effective-teaching-and-learning-environments_9789264068780-en.html
- Oliver, R. M., Wehby, J. H., & Reschly, D. J. (2011). Teacher classroom management practices: Effects on disruptive or aggressive student behaviour. *Campbell Systematic Review*, 7 (1), 1-55. Retrieved from <https://files.eric.ed.gov/fulltext/ED519160.pdf>
- Osakwe, R. N. (2014). Classroom management: A tool for achieving quality secondary school education in Nigeria. *International Journal of Education* 6(2). <http://dx.doi.org/10.5296/ije.v6i2.5616>
- Republic of Kenya Ministry of Education (2020). *Basic education statistical booklet 2019*. Nairobi, Ministry of Education.
- Simonsen, B., Fairbanks, S., Myers, & Sugai, G. (2008). Evidence-based practices in classroom management: Consideration from research to practice. *Education and Treatment of Children* 31(3) 351-380. Retrieved from <https://bottemabeutel.com/wp-content/uploads/2014/01/Simonson-et-al.-evidence-based-practices.pdf>
- Sunday-Piaro, M. (2008). Classroom management and students' academic performance in public secondary schools in Rivers State. *International Journal of Scientific Research in Education*, 11(5), 940-963. Retrieved from <https://casirmediapublishing.com/wp-content/uploads/2021/02/Page-63-101-2020-5083.pdf>
- Teachers Service Commission (2015). Code of regulation for teachers. Author: Nairobi, Kenya.
- Treece, E. W., Treece, J. W. (1982). *Elements of research in nursing (3rded.)*. St. Louis, MO: Mosby. Retrieved from https://books.google.ro/books/about/Elements_of_Research_in_Nursing.html?id=mDdtAAAAMAAJ&redir_esc=y

- UNESCO (2014). EFA Global Monitoring Report 2013/2014: Teaching and Learning, Achieving Quality for All, UNESCO, Paris. Retrieved from <https://uis.unesco.org/sites/default/files/documents/teaching-and-learning-achieving-quality-for-all-gmr-2013-2014-en.pdf>
- UNESCO Institute for Statistics (2017). More Than One-Half of Children and Adolescents Are Not Learning Worldwide, UIS, Montreal. Retrieved from <https://uis.unesco.org/sites/default/files/documents/fs46-more-than-half-children-not-learning-en-2017.pdf>
- York, T. T., Gibson, C. & Rankin, S. (2015). Defining and measuring academic success. *Practical Assessment, Research and Evaluation*, 20(5). Retrieved from https://www.researchgate.net/publication/278305241_Defining_and_Measuring_Academic_Success
- Waterhouse, P. (2001). *Classroom management*. Network Educational Press Limited: Stanford. Great Britain.

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