

Principals' Role In Classroom Visitation And Its Influence On Students' Academic Performance In Chemistry In Public Secondary Schools In Machakos County, Kenya

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Abstract: The main purpose of this study was to determine the influence of classroom visitation by the principal on students' academic performance in chemistry in public secondary schools in Machakos County, Kenya. The study was guided by Transformational Leadership Theory developed by James MacGregor Burns in (1978). Convergent Parallel Mixed Methods Research Design was employed to enhance simultaneous collection of quantitative and qualitative data. The target population was 365 principals and 545 chemistry teachers in public secondary schools in Machakos County. Simple random sampling was used in sampling 73 principals and 109 chemistry teachers. Data was collected using questionnaires, interview schedules and document analyses. Quantitative data was analyzed using descriptive and inferential statistics with the help of SPSS Computer Programme version 26. Qualitative data from open-ended questions was analyzed using content analysis. Using Pearson moment correlation coefficient, the study established that classroom visitations by principals significantly influence students' academic performance in chemistry ($r = .474, p < .001$). The study established that the principals rarely find time to walk through classes and laboratories to observe ongoing teaching and learning.

I. INTRODUCTION

Principals as instructional supervisors in secondary schools are responsible for overseeing the teaching and learning process. As instructional supervisors, principals focus directly on functions that are related to teaching and learning in secondary schools (Hallinger and Murphy 2012). According to Marzano (2017), the principals as instructional supervisors have to: supervise day-to-day classroom activities; make unannounced visits to classrooms; evaluate teachers' performance in lesson delivery; check student's learning activities; and classroom management strategies and students' participation approaches.

Ekundayo (2010) notes that instructional supervision by the principal involves regularly visiting classrooms to observe his/her teachers teach as an objective way to evaluate knowledge and skills of individual teachers. Marvel and

Morton (2016) identified the principal as the single-most influential person in a school. The principal is the person responsible for all activities that occur in and around the school building. It is the principals' management practices that set the tone of the school, the climate for teaching, the level of professionalism, the morale of teachers and the degree of concern for what students may or may not become (Marvel and Morton, 2006).

In the United Arab Emirates Al-Hosani (2015) observed that the principal is in charge of what occurs at school, such as promoting educational activities, conducting classroom visitation and supervising teaching methods. In Kenya, secondary school principals' are leaders and managers of all that takes place in school. They are charged with ensuring that educational strategies are put in place to support effective teaching and learning in their schools. The main role of the principals in Kenya is to uphold academic excellence of their

students by focusing on teaching and learning in terms of measurable students' and teachers' performance. The principals have the overall duty of influencing all the activities taking place in school, towards the set goals through proper supervision of all the learning activities (Mutinda, 2016).

Poor instructional supervision of teachers is one of the confronting problems public secondary schools experience leading to dismal academic performance (Oyewole and Alonge, 2013). Non-regular instructional supervision has led to some of the multifarious problems that have plagued public secondary schools including poor students' performance and poor attitude of teachers towards work (Usman, 2015). Sule (2013) opined that as a measure of improvement on the glaring downward trend on educational achievement, instructional supervision is an indispensable instrument for checking teachers' job performance. According to Kotirde and Yunos (2014), in schools where teaching and learning are not consistently monitored by principals, the end result is that the level of students' achievement is usually affected. It is against this background that this paper was motivated to examine the influence of classroom visitations on students' academic performance.

A. STATEMENT OF THE PROBLEM

Class visitations helps the principals to have a first-hand information of what takes place in classroom enabling them to monitor, support and advice the learning and teaching done by the teachers and students. When classroom observation is done and its feedback given, it becomes integral in improving teaching performance and practice but many teachers express their anxiety and worry when it comes to its application. The study therefore seeks to examine the perception of both principals and teachers of chemistry in regards to classroom visitations and how it impacts students' academic performance.

B. PURPOSE OF THE STUDY

The study intends to examine the influence of classroom visitation by the principal on students' academic performance in chemistry in public secondary schools in Machakos County, Kenya.

C. HYPOTHESIS OF THE STUDY

The study was guided by the following hypothesis:

H₀1: There is no statistically significant effect between the principals' class visitations and students' academic performance in chemistry in public secondary schools in Machakos County, Kenya.

II. METHODOLOGY OF RESEARCH

In order to be able to answer the research questions, a Convergent Parallel Mixed Methods Research Design was employed. The study targeted all the 365 principals of the public secondary schools and the 545 teachers of chemistry in Machakos County. Hence 73 principals and 109 teachers of

chemistry were sampled for the study using simple random sampling respectively. Thus, the total sample size of the study was 182 respondents. The research instrument used include questionnaires, interview and document analysis.

To ensure consistency, data was cleaned so as to detect and remove errors. Cleaned data was coded by assigning numerals to the answers and both descriptive and inferential statistics analyses generated. Coding of the data was done using SPSS computer programme version 26. Descriptive statistics representing various research items were generated in frequencies, mean, standard deviation and variance and summarized using tables and graphs with a statistical discussion of the results given. Responses from the interview guides were recorded on tape then presented in form of narratives. Data from the interviews was transcribed first, then thematically analysed in order to connect main themes that emerged from the study into a clear narrative. Inferential statistics included correlation and regression.

III. RESULTS AND DISCUSSIONS

This section presents the study outcomes and analysis of the findings according to the study objective.

A. CLASSROOM VISITATIONS AND STUDENTS 'ACADEMIC PERFORMANCE

The participants' descriptive scores on the frequency at which the principal carry out the listed activities were analysed in order to obtain the frequencies and percentages. The results were presented as shown in Table 1.

Statement	W (%)	F (%)	M (%)	O (%)	N (%)
1. Walk through classes and laboratories	3(3.49)	5(5.81)	11(12.79)	42(48.84)	25(29.07)
2. Pre-observation conference	1(1.16)	4(4.65)	23(26.74)	39(45.35)	19(22.09)
3. Post observation conference	1(1.16)	6(6.98)	25(29.07)	44(51.16)	10(11.63)
4. Observing teaching and learning activities	13(15.12)	12(13.95)	34(39.53)	25(29.07)	2(2.33)

NB: Weekly (W), Fortnightly (F), Monthly (M), Once per term (O) and Never (N)

Source: Survey Data (2023)

Table 1: Classroom observation (N=86)

The information on Table 1 shows that 42 (48.84%) of the teachers of chemistry noted that principals walk through classes and laboratories once per term; 11 (12.79%) monthly, five (5.81%) fortnightly and three (3.49%) weekly. While 25 (29.07%) were of the view that principal never walk through classes and laboratories. The findings reveal that majority of the respondents 39 (45.35%) were of the view that principals were involved in pre-observation conference once per term, 23 (26.74%) monthly, four (4.65%) fortnightly and one (1.16%) weekly. A significant number of respondents 19 (22.09%) were of the view that the principals are never involved in pre-observation conference. Additionally, 44 (51.16%) of the teachers of chemistry indicated that principals carry out post observation conference once per term, 25(29.07%) monthly, six (6.98%) fortnightly and one (1.16%) weekly. Moreover, 10 (11.63%) of the respondents pointed out that principals while undertaking their administrative duties never carry out post

observation conference. The analysed data further reveals that 34 (39.53%) of the respondents indicated that principals observe teaching and learning activities in their respective secondary schools on monthly basis, 25 (29.07%) once per term, 13 (15.12%) weekly and 12 (13.95%) fortnightly. On the other hand, two (2.33%) of the respondents indicated that principals never observed teaching and learning activities.

The study findings reveal that the principals rarely find time in their busy schedule to walk through classes and laboratories. During an in-depth face-to-face interview, one of the principals had this to say:

Usually I do not visit the teachers when they are teaching as I am mostly engaged in other administrative duties. However, I have delegated the monitoring responsibility to my able deputy and HODs.

Another Principal with a similar opinion with regards to walk through classes and laboratories had this to say:

Due to my workload as a principal, I rarely have adequate time to frequently visit classes and laboratories. However in special cases were some of the students are underperforming, I usually organise for impromptu class visitation so as to observe the teacher's lesson delivery method and later discuss the way forward with the concerned teacher.

The findings concur with Nyamwamu's (2010) that the principals had many other responsibilities in managing the school, which were more important than class visitation. This further supports the results of Mwendia (2018) that found that classroom visitation was rarely practiced by principals. This is in contrast to a study by Sule, Eyiene, and Egbai (2015) that found that classroom visits are a basic management for instructional delivery. The principal prepares a monitoring schedule that shows how the teacher controls classroom, manages learning diversity, lesson presentation, content mastery by the teacher, student involvement and teaching methods used. This is in line with Mugambi (2015) who posits that principal at high performing schools usually visits classes regularly. A study by Otieno, Otieno and Magoma, (2021) found out that the principals visited and monitored teaching in the classrooms and the visitations had significantly improved learner's achievement in examinations. Majority of the teachers agreed that the principals monitored their lessons fortnightly and gave them feedback for improvement. The study recommended that principals should collaborate with the teachers to develop a comprehensive plan for classroom visitation in their schools indicating the procedures, instructional technology requirements, and objectives of the exercise. This is further supported by Ossai and Ichazu (2023) study which indicated that principals observe teaching and learning activities in their schools through regular visitation of teachers in the classroom and having post classroom visitation discussion.

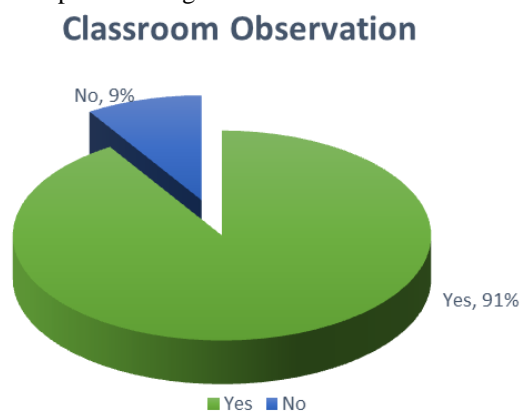
This finding supports the findings of Baffour-Awuah (2011) who found that most instructional supervisors in the study did not hold pre-observation conferences with their teachers. This finding in Ghana that supervisors do not involve teachers in pre-observation conference is not an isolated case. Omondi and Tikoko (2021) observed that principals' instructional supervisory methods were mainly limited to observing teachers professional records and checking on

learner's progress records while giving minimal attention to class visits, pre-observation conference and post observation conference. This finding also confirms Mavindu (2013) who observed that principals are occasionally involved in post observation conference as they have many responsibilities and hence lack sufficient time to monitor what goes on in the classroom.

In line with this finding, a study by Garba, Waweru and Kaugi (2019) also revealed that the post-observation conference was often neglected by many principals in public secondary schools as they failed to provide teachers with feedback on lesson observation. Majority of the chemistry teachers 34(39.53%) pointed out that principals observe teaching and learning activities on monthly basis. This supports a study by Mutinda (2016) which indicated that principals visit students in classrooms on monthly basis to observe teaching and learning activities.

B. CLASS OBSERVATION INFLUENCE ON ACADEMIC PERFORMANCE IN CHEMISTRY

The study sought to establish the influence of class observation on academic performance in chemistry. The results are reported in Figure 1.



Source: Survey Data (2023)

Figure 1: Class observation influence on academic performance in chemistry (N=86)

Figure 1 reveals that majority of the teachers of chemistry 78(91%) reported that class observation has influence on academic performance in chemistry, while only eight (9%) of the teachers of chemistry reported that class observation had no influence on academic performance. The teachers of chemistry noted that classroom observation helps in measuring strengths and weaknesses as far as the needs of the learners are concerned leading to improved academic performance. They further reported that classroom observation enhances the teacher's ability to improve the classroom instruction. Additionally, they noted that feedback from classroom observation assists in modifying and improving teaching behaviours which ultimately contributes to improved academic performance.

When asked about influence of classroom observation on academic performance in chemistry, one of the principals commented:

My visits to classrooms is not very regular due to my duties. However, I know that classroom visitation plays a very

key role in academic performance of my students as it assists in guiding teachers on the appropriate teaching methods.

This can be supported by the following statement from one of the principals:

Mostly, I have limited my instructional supervisory duties to monitoring professional documents. But, I also know that classroom observation is instrumental in overall academic performance of my students and that is why I have delegated classroom observation to my deputy and HODs so as to get timely feedback from them.

Another principal noted that:

Through classroom observation I can see just where support is needed and I am able to build trust in teachers as I observe them working their magic in the classroom. This mutual working relationship assists in coming up with solutions on how to improve academic performance in our school.

These findings are in agreement with Ceria (2021) who asserts that teachers who are regularly observed are less likely to fall into slumps unnoticed as they know that principals are coming for observations regularly, they are mindful of their instructional practices. Ceria study results revealed that students who were observed when being taught by their teachers, all of their academic performances improved at a significant level. This is supported by (Mudzanani and Makgato, 2016) who reported that instructional leaders should be conscious of what is happening in the classrooms by means of regular monitoring of teaching/learning processes to enhance the students' performance in the national examination. This conforms to Cheboi (2014) who posit that classroom observation and discussions after the lessons can guide teachers to reflect on their own teaching practices allowing them to develop particular skills and techniques which are beneficial to the overall student academic performance. This finding is also in line with Barrogo (2020) who mentioned that classroom observation is an integral part of teaching as it provides a positive critical framework for evaluating one's practice, improving skills, and developing strengths which are meant to improve the academic performance of students.

C. CORRELATION AND REGRESSION ANALYSIS

The study sought to examine the influence of classroom visitation by the principal on students' academic performance in chemistry in public secondary schools in Machakos County, Kenya. This was guided by the following null hypothesis;

H₀1: There is no statistically significant effect between the principals' class visitations and students' academic performance in chemistry in public secondary schools in Machakos County, Kenya.

Pearson product correlation of class visitation and students' academic performance was found to be positively low and statistically significant ($r = .474$, $p < .001$). Hence, H₀1 was rejected. This show that to some extent, an increase in class visitation would significantly improve students' academic performance. This study concludes that there is a statistically significant relationship between the principals' class visitations and students' academic performance in

chemistry in public secondary schools in Machakos County, Kenya. The correlational analysis results are shown in Table 2.

		Class visitation	Student performance
Class visitation	Pearson Correlation	1	.474**
	Sig. (2-tailed)		.000
	N	86	86
Student performance	Pearson Correlation	.474**	1
	Sig. (2-tailed)	.000	
	N	86	86

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

Table 2: Correlation analysis of class visitation and students' academic performance

A Regression analysis was conducted to empirically to investigate the Analysis for the influence of classroom visitation by the principal on students' academic performance. The findings from Table 3 in the regression analysis suggest that the regression model adequately captures the relationship between independent variables and the influence of classroom visitation by the principal on students' academic performance. The R-squared value of 0.435 indicates that 43.5 % of the variability in students' academic progress can be explained by classroom visitation by the principal. This positive impact is observed across statistical variables related to student performance and academic progress. The findings suggest that the notable improvement in students' academic achievements within public secondary schools in Machakos County, Kenya can be primarily attributed to the effectiveness of classroom visitations conducted by the principal. It's noteworthy that the observed variation is relatively modest.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.664	0.441	0.435	0.724

a. Predictors: (Constant), Classroom Visitations

Table 3: Model Summary for the impact of classroom visitation by the principal

The comprehensive significance of the model is detailed in Table 4. With an F-statistic of 66.320, the overall model demonstrates statistical significance. The findings suggest that the notable improvement in students' academic achievements within public secondary schools in Machakos County, Kenya can be primarily attributed to the effectiveness of classroom visitations conducted by the principal. Table 4 shows the results.

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	34.787	1	34.787	66.320	0.000 ^b
1 Residual	44.061	84	0.525		
Total	78.849	85			

a. Dependent Variable: Students' Academic Performance

b. Predictors: (Constant), Classroom Visitations

Table 4: ANOVA for the impact of classroom visitation by the principal

The impact of classroom visitations coefficients are presented in Table 5. The results show that students' performance and classroom visitations are significant to the model since the p-value for the constant and gradient are less

than 0.05. The findings imply that one positive unit change in principals' classrooms visitations leads to a change in students' performance at the rate of 70.5%. This confirms the positive effect of classroom visitations on students' academic performance.

The fitted equation is as shown below

$$Y = 0.114 + 0.512X_1$$

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-0.114	0.240		-0.475	0.636
1 Classroom Visitations	0.512	0.063	0.664	8.144	0.000

a. Dependent Variable: Students' Academic Performance

Table 5: Coefficients of the impact of classroom visitation by the principal

IV. DISCUSSION OF THE RESEARCH FINDINGS

The study established that the principals rarely find time to walk through classes and laboratories to observe ongoing teaching and learning. Despite the fact that principals have not fully embraced class visitation, the teachers of chemistry revealed that class visitation influence academic performance in chemistry. Pearson product correlation of class visitation and students' academic performance was found to be positively low and statistically significant ($r = .474, p < .001$). The R-squared value of 0.435 indicates that 43.5% of the variability in students' academic performance can be explained by classroom visitation by the principal. This led to the rejection of the null hypothesis and adoption of the alternative hypothesis that there is a statistically significant relationship between the principals' class visitations and students' academic performance in chemistry in public secondary schools in Machakos County, Kenya.

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