



SCHOOL-BASED MONETARY INCENTIVES FOR TEACHERS AS DETERMINANTS OF STUDENTS' ACADEMIC PERFORMANCE IN PUBLIC SECONDARY SCHOOLS IN KISUMU WEST SUB- COUNTY, KENYA

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ABSTRACT

The performance of students in the Kenya Certificate of Secondary Education varies from school to school over time despite the fact that the Kenya Government accords teachers similar training in colleges and Universities versus similar pay package corresponding with their scales. Kisumu West sub-county continuously lagged behind the neighbouring Kisumu Central and Kisumu East and Kisumu North with an average mean of more than 1.0 over the period 2013 to 2015. In addition in 2015 for instance, the best two schools in Kisumu West Sub County had mean scores of 10.94 and 8.99 respectively while the last two had 2.55 and 3.10 respectively. This disparity raises concerns among the education stakeholders in the Sub- County. Motivation theorists believe that performance is a result of concerted effort which has been induced by some reward. The purpose of this study was therefore to establish school-based monetary incentives for teachers as determinants of students academic performance in public secondary schools in Kisumu West Sub County. Holistic Operation Model as interpreted by (Abagi and Odipo (1997) guided the study. The study adopted descriptive survey and correlational research design. The target population consisted of 30 public secondary schools with 354 teachers and 30 Principals. Through Yamane's formula, 187 teachers, 27 Principals, and 4 CSOs were selected as the study sample. Questionnaire was used to collect data from teachers and principals, while interview schedule was used to collect data from CSOs. Qualitative data obtained from interviews and document analysis was analyzed through thematic analysis and grouped into thematic areas. Quantitative data from questionnaire was analyzed by means of descriptive statistics. The study found that monetary incentives is rated by teachers at (M=3.05; SD=1.12) and principals at (M=3.05; SD=1.21). Monetary incentives have a statistically significant influence at .000 and .002 p-value at 0.05 on students' academic performance. The study concludes that monetary incentives motivate teachers to significantly influence students academic performance in public secondary schools. This study may be useful to school managements and administrators in apportioning school resources for teacher motivation.

BACKGROUND

Teachers constitute the core of the education system and their importance in student academic performance has been widely confirmed by many studies (Lewin, 2005). Traditional inputs like teaching and learning materials have been shown to have no measurable impact in student performance when skills and motivation is lacking among the teaching staff (Glewwe, Ilias, and Kremer (2010). Teacher effectiveness is dependent on various factors such as working conditions, organization structure, training and development, and security of tenure and, perhaps most importantly, reward for the job, that is, salary and wages, and other non-monetary compensations or incentives. Although the attractiveness of the reward package depends on personal perceptions, Bratton and Gold (2007) asserts that rewards considered better are able to attract and retain better performers. Teachers are motivated to work hard and attain better academic performance if they believe that better engagement terms are put in place for them by the learning institution. However, engagement terms and incentives put in place by different learning institutions to motivate teachers are yet to be identified and empirically determined.

There is a nascent but growing body of literature on the role played by teacher incentives on student performance. Duflo and Hanna (2005) randomly sampled 60 schools in rural India and provided them with financial incentives to reduce absenteeism. They found that teacher absence rate was significantly lower in treatment schools (22 percent) compared to control schools (42 percent) and that student achievement in treatment schools was 0.17 higher than in control schools. Springer, et al. (2010) evaluated a three-year pilot initiative on teacher incentives in the Metropolitan Nashville School System from 2006 to 2009 school year. Pegging performance levels at between 80% and 90%, they found there was no significant treatment effect on student achievement and on measures of teachers' response such as teaching practices. Similarly, Glewwe, Ilias, and Kremer (2010) reported results from a randomized evaluation that provided 4th through 8th grade teachers in Kenya with group incentives based on test scores and found that while test scores increased in program schools in the short run, students did not retain the gains after the incentive program ended. The extent to which school based (or institution based) incentives influence academic performance of students needed therefore to be established.

Salary has been found by many researchers (Bokomey, 2007& Chan, 2008) as an important component of employee compensation not only because it satisfies the basic physiological needs of a human being but also because it serves as

a basis for comparison against similar positions and roles in other organizations. However, in order to gauge the overall attractiveness of an organization's total remuneration packages, indirect compensations are frequently considered by many employees (Lai, 2009). Most organizations are today resorting to indirect monetary incentive to align employees' behavior with organizational goals. This is due to the increased cost of living and the need to attract and retain top performers in the organization, and organizations have also found this to be an effective way of motivating and rewarding top performers (Hewitt Associates, 2007; 2008). According to Chan (2008), there are four most commonly used indirect monetary compensation schemes, being task related rewards, performance related rewards, competency related rewards, and seniority based rewards.

Monetary incentives provide the flexibility for the recipients to spend the money in whichever way they (employees) want it, and it is mostly useful when they (employees) expect the same kind of reward the next year (or period) should they exert similar effort in their work (Lai, 2009). Employees whose performances are based on key results or performance indicators like salespersons; executives, etc. normally benefit most from this arrangement. School based incentives for teachers are mostly designed following similar criterion (Magnusson & Nyrenius, 2011). However, documented literature focusing on the influence of monetary incentives on students' academic performance seems to reveal inconsistent findings.

Teacher effectiveness is dependent upon the level of motivation derivable from teaching duties (Bratton & Gold, 2007). Although the reward system for teachers is universally provided by the government, the reason why some teachers exert more effort and produce better academic performance may only be attributed to individual school-based incentives. For instance, academic performance of students in Kisumu West Sub County has revealed glaring disparities in the past 5 years.

According to Kenya Secondary Certificate Education (KSCE) examination results for 2013,2014 and 2015 received by the 30 schools from Kisumu West Sub County, a very wide gap exists between the top public secondary schools and the last schools (Table 1).

Table 1.: Kisumu West KSCE performance of 10 Schools

School	Entrants	M-score 2015	MG	M-score 2014	M-score 2013
TOP FIVE					
School A	249	10.935	A-	10.970	10.415
School B	152	8.987	B	8.067	8.919
School C	97	7.284	C+	7.377	7.092
School D	184	7.082	C+	6.489	6.592
School E	87	6.872	C+	6.607	6.265
LAST FIVE					
School F	25	3.920	D+	4.305	4.386
School G	27	3.780	D+	3.540	3.640
School H	28	3.286	D	4.039	3.753
School I	10	3.100	D	2.987	NEW
School J	22	2.545	D	2.333	NEW

Source: SCDE's Office Kisumu West

STATEMENT OF THE PROBLEM

Good academic performance in any examination is only achievable through effective teaching and learning. However, disparities in academic performance noted among public secondary schools in Kisumu West Sub County in the past five years raise a lot of concern among the stakeholders in education. For instance, the difference in the mean score between the best school and the last school in the 2015 KCSE Examination is 8.390. Kisumu West sub-county continuously lagged behind the neighbouring Kisumu Central and Kisumu East and Kisumu North with an average mean of more than 1.0 over the period 2013 to 2015. The deviation between the means of the top five and the last five schools is 4.906 compared to that of Kisumu Central which are 5.988 and 3.467 respectively and Kisumu East which are 2.685 and 1.657 respectively. This seemed to suggest that the level of motivation of teachers vary between secondary schools in the neighboring sub counties of Kisumu.

The role played by teachers is most important in lessons delivery and student evaluation, and this role relies a lot on the level of teacher motivation. Incentives have been applied in organizations to enhance worker motivation so that performance of the organization is improved. Teachers Service Commission rewards teachers in public secondary schools uniformly according to graduated scales, and no special incentives or rewards are given to teachers who achieve

exemplary performance, neither is there penalties met on low achieving teachers, in their schools. There has been no effort made to establish reasons why teachers who have had similar training in same colleges or universities can post different performances as has been witnessed from National examination results each year, although this could be attributed to teacher motivation. This study therefore sought to establish the influence of school based incentives (provided to motivate teachers) on students' academic performance in public secondary schools in Kisumu West Sub County, Kenya.

THEORETICAL ANCHORING OF STUDY

The study was based on Holistic Operation Model espoused by Haddad, and developed by Abagi & Odipo (1997) in efficiency of primary education in Kenya . In this model, efficiency implies that inputs are maximized in an effort to produce optimum results or output, (goods or service). School based monetary incentives are the independent variable while students' academic performance is the dependent variable which focuses on outputs in relation with the inputs into the education system, with outputs being looked at through the lenses of academic achievements in examinations (KCSE). Monetary cash incentives include overtime cash incentives, and cash rewards for performance. The foregoing had similarity with Dawo, Kawasonga and Gogo (2015) whereby school leaders were to harmonize workplace inputs to inspire teachers towards focused approaches to school organizational objectives, key among them, academic performance that is ordinarily gauged using KCSE outcome.

RESEARCH HYPOTHESES

There is no statistically significant relationship between monetary incentives for teachers and academic performance of students in public secondary schools in Kisumu West Sub County.

FINDINGS

Teachers were subjected to the following statements about student academic performance in their schools. This was because teachers are the single most involved personnel in the academic life of a student in terms of imparting knowledge, supervision of academic activities and student evaluation. They rated academic performance with these statements as shown in Table 2:

Table 2. Teacher Responses on Student Academic Performance in Secondary Schools in Kisumu West. (N=170)

Statement	1	2	3	4	5	MN
Students in my school consistently do their homework	11	18	129	22	0	3.07
Student in my school consult teachers in learning subject areas	3	14	146	7	0	2.92
Students continuous assessment indicate improvement effort	21	17	127	5	0	2.62
End year results of students in my school are a reflection of the within year teaching	9	16	133	12	0	2.87
A teacher can be encouraged by the kind of results output after a teaching cycle	15	19	130	6	0	2.64
Peer teaching is effective in our school	45	46	72	7	0	2.12
Individual revision is used effectively for enhanced academic outcomes	01	39	127	3	0	2.78
Overall mean						2.72

KEY: 1= Never; 2= Rarely; 3= Sometimes; 4=Often; 5=Always.

Interpretation: 1.0- 1.50 Poor; 1.51- 2.50 Below Average; 2.51- 3.50, Satisfactory; 3.51-4.50, Good;4.51-5.0, Very Good.

Table 2. reveals that students' academic performance from the assessment of teachers was satisfactory at a mean of 2.72. It can be noted that students are scoring least ,mean (2.12)with regard to peer teaching, and highest mean (3.07) with regard to consistency of doing homework.

MONETARY INCENTIVES FOR TEACHERS AND STUDENTS' ACADEMIC PERFORMANCE

The study investigated the influence of monetary incentives for teachers on students' academic performance. The respondents were presented with statements on how monetary incentives to teachers influence students' academic performance and were asked to rate the extent to which they believe the same is applicable or true as: **1= Very Low; 2= Low; 3= Moderate; 4=High; 5=Very High.** The Mean (M) of the items as well as standard deviation (SD) obtained through descriptive statistics is presented in Table 3.

Table 3: Influence of Monetary Incentives according to Teachers

Monetary Incentives	Frequency and (%)					n=170	
	VH	H	M	L	VL	Mean	SD
Offering teachers overtime cash incentives	41(24)	41(24)	33(19)	32(19)	23(14)	3.26	1.37
Offering cash for extra lessons taken	67(39)	73(43)	19(11)	7(4)	4(3)	4.13	0.93
Offering cash for each subject passed by students	73(43)	75(44)	10(6)	5(3)	7(4)	4.19	0.97
Offering cash rewards for early completion of the syllabus	7(4)	15(9)	43(25)	56(33)	49(29)	2.26	1.10
Offering cash for most disciplined class	14(8)	22(13)	39(23)	50(29)	45(26)	2.47	1.24
Cash rewards for leading subject teachers	41(24)	44(26)	32(19)	24(14)	29(17)	3.26	1.41
Cash rewards for non-absenting teachers	4(2)	19(11)	43(25)	56(33)	48(28)	2.26	1.06
Cash rewards for more workload	70(41)	77(45)	9(5)	7(4)	7(4)	4.16	0.99
Monetary rewards for punctual teachers	7(4)	15(9)	43(25)	56(33)	49(29)	2.26	1.10
Monetary rewards for social and cooperative teachers	4(3)	19(11)	36(21)	60(35)	51(30)	2.21	1.07
Overall Mean						3.05	1.12

Interpretation Key:

1.00 – 1.44:	Very Low
1.45 – 2.44:	Low
2.45 – 3.44:	Moderate
3.45 – 4.44:	High
4.45 – 5.00:	Very High

Table 3 illustrates that the influence of monetary incentives for teachers on students' academic performance is moderate (M=3.05; SD=1.12). Offering teachers overtime cash incentives (M=3.26; SD=1.37); offering cash for most disciplined class (M=2.47; SD=1.24), and Cash rewards for leading subject teachers (M=3.26; SD= 1.41) have moderately influenced students' academic performance in the sampled schools. On the other hand, offering cash for extra lessons taken (M=4.13; SD=0.93); Offering cash for each subject passed by students (M=4.19; SD=0.93); and Cash rewards for

more workload (M=4.16; SD=0.99) have influenced students' academic performance to a large extent. These findings seem to suggest that monetary incentives directed towards achievement scores and pedagogy have influence on students' academic performance. However, Offering cash rewards for early completion of the syllabus (M=2.26; SD=1.10); Cash rewards for non-absenting teachers (M=2.26; SD=1.06); Monetary rewards for punctual teachers (M=2.26; SD=1.10); and Monetary rewards for social and cooperative teachers (positive team work) (M=2.21; SD=1.07) have influenced students' academic performance to a low extent. This tends to imply that monetary incentives for regular attendance, completion of syllabi as well as team work is perceived to have limited motivation and consequently low influence on students' academic performance.

Table 4. Influence of Monetary Incentives according to Principals

Monetary Incentives	Frequency and (%)					n=20	
	VH	H	M	L	VL	Mean	SD
Offering teachers overtime cash incentives	5(25)	5(25)	4(20)	3(15)	3(15)	3.30	1.42
Offering cash for extra lessons taken	8(40)	8(40)	2(10)	1(5)	1(5)	4.05	1.10
Offering cash for each subject passed by students	9(45)	8(40)	1(5)	1(5)	1(5)	4.15	1.09
Offering cash rewards for early completion of the syllabus	1(5)	1(5)	5(25)	7(35)	6(30)	2.20	1.11
Offering cash for most disciplined class	2(10)	3(15)	5(25)	5(25)	5(25)	2.60	1.31
Cash rewards for leading subject teachers	5(25)	5(25)	4(20)	3(15)	3(15)	3.30	1.42
Cash rewards for non-absenting teachers	1(5)	2(10)	5(25)	5(25)	7(35)	2.25	1.21
Cash rewards for more workload	8(40)	9(45)	1(5)	1(5)	1(5)	4.10	1.07
Monetary rewards for punctual teachers	1(5)	2(10)	5(25)	6(30)	6(30)	2.30	1.17
Monetary rewards for social and cooperative teachers	1(5)	2(10)	4(20)	7(35)	6(30)	2.25	1.16
Overall Mean						3.05	1.21

Table 4. illustrates that the influence of monetary incentives for teachers on students' academic performance is moderate (M=3.05; SD=1.21). Offering teachers overtime cash incentives (M=3.30; SD=1.42); offering cash for most disciplined class (M=2.60; SD=1.31), offering cash rewards for early completion of the syllabus (M=2.60; SD=1.31) and Cash rewards for leading subject teachers (M=3.30; SD= 1.42) have moderately influenced students' academic performance in the sampled schools. On the other hand, offering cash for extra lessons taken (M=4.05; SD=1.10); Offering cash for

each subject passed by students ($M=4.15$; $SD=1.09$); and Cash rewards for more workload ($M=4.10$; $SD=1.07$) have highly influenced students' academic performance. These findings seem to suggest that monetary incentives directed towards achievement scores and pedagogy have influence on students' academic performance. However, Cash rewards for non-absenting teachers ($M=2.25$; $SD=1.21$); Monetary rewards for punctual teachers ($M=2.30$; $SD=1.17$); and Monetary rewards for social and cooperative teachers (positive team work) ($M=2.25$; $SD=1.16$) have low influence on students' academic performance. This tends to imply that monetary incentives for regular attendance, completion of syllabi as well as team work is perceived to have limited motivation and consequently low influence on students' academic performance.

During the interviews with the SCOs, their opinions were sort on monetary incentives to teachers. Majority of them were aware that school managements offer monetary incentives to motivate outstanding performance among the teachers. They indicated that although the TSC does not allow monetary incentives, the MOE allows school management to discuss with the parents and agree on any extra levies to be charged in school particularly on remedial lessons. Some schools use some of this money to motivate their teachers so as to enhance academic performance.

This finding seems to concur with Chitimwango (2016) who assessed the effect of rewards system on the performance of teachers in three secondary schools in Zambia. It found that monetary incentive that is performance-based ranked the highest. Similarly, Muralidharan and Sundararaman (2011) established in a study in India that students in incentive schools performed significantly better than those in control schools by 0.27 and 0.17 standard deviations in math and language tests, respectively. Similarly, Fryer (2013) also established that teacher incentives do increase student performance, attendance, or graduation in a study on 200 New York City public schools.

However, findings in the present study seem to contrast Adebajo (2018) who revealed in a study done in Nigeria that the issues underlying the state of productivity of public school teachers run deeper than remuneration or accountability. Moreover, Narsee (2012), in a study whether a well-designed reward programme would result in the motivation of employees in Pretoria, South Africa established that there was more of a preference for career development, coaching/mentoring and work life balance. It is thus emerging that monetary incentives are perceived as having short term influence on students' academic performance. However, the same might not have long term influence on students' academic performance.

The level of student academic performance as rated by teachers was computed from frequency of responses. Mean Likert scale responses in each item was computed to create an approximately continuous variable but within an open interval of 1 to 5. This outcome was subjected to ANOVA with school-based monetary incentives responses from teachers. The significant level (p-value) was set at .05, such that if the p-value was less than 0.05, the null hypothesis would be rejected. This is as shown in Table 5.

Table 5.: Teacher Outcomes on influence of monetary incentives on student academic performance in Kisumu West Sub-county (N=170)

		School based Monetary incentives	Student academic performance
School based Monetary incentives	Pearson Correlation	1	.360**
	Sig. (2-tailed)		.000
	N	169	169
Student academic performance	Pearson Correlation	.360**	1
	Sig. (2-tailed)	.000	
	N	169	169

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

The finding of the study (Table 5) shows that there was statistically significant positive correlation between school-based monetary incentives in public secondary schools ($r = .360$; $p < .05$). Given that the relationship is statistically significant, the hypothesis that, “there is no statistically significant relationship between school based monetary incentives and student academic performance in public secondary schools in Kisumu West Sub-county” was rejected.

CONCLUSION

The findings indicate an agreement by both the teachers and principals perceptions of influence of monetary incentives for teachers on students' academic performance is moderate ($M=3.05$; $SD=1.12$) and ($M=3.05$; $SD=1.21$) respectively. For teachers, a mean of 3.05 ($SD=1.12$). These findings seem to suggest that monetary incentives directed towards achievement scores and pedagogy have influence on students' academic performance. However, Offering cash rewards for early completion of the syllabus ($M=2.26$; $SD=1.10$); Cash rewards for non-absenting teachers ($M=2.26$; $SD=1.06$); Monetary rewards for punctual teachers ($M=2.26$; $SD=1.10$); and Monetary rewards for social and cooperative teachers (positive team work) ($M=2.21$; $SD=1.07$) have influenced students' academic performance to a low extent.

On the other hand, the principals indicate that offering teachers overtime cash incentives ($M=3.30$; $SD=1.42$); offering cash for most disciplined class ($M=2.60$; $SD=1.31$), offering cash rewards for early completion of the syllabus ($M=2.60$; $SD=1.31$) and Cash rewards for leading subject teachers ($M=3.30$; $SD=1.42$) have moderately influenced students'

academic performance in the sampled schools. Similarly, offering cash for extra lessons taken (M=4.05; SD=1.10); Offering cash for each subject passed by students (M=4.15; SD=1.09); and Cash rewards for more workload (M=4.10; SD=1.07) have highly influenced students' academic performance. These findings seem to suggest that monetary incentives directed towards achievement scores and pedagogy have influence on students' academic performance. However, Cash rewards for non-absenting teachers (M=2.25; SD=1.21); Monetary rewards for punctual teachers (M=2.30; SD=1.17); and Monetary rewards for social and cooperative teachers (positive team work) (M=2.25; SD=1.16) have low influence on students' academic performance. This tends to imply that monetary incentives for regular attendance, completion of syllabi as well as team work is perceived to have limited motivation and consequently low influence on students' academic performance. In addition, hypothesis testing revealed that there is a statistical significant relationship between school based monetary incentives and student academic performance at ($r=.000$, $p=0.5$) relationship.

RECOMMENDATIONS

School management should apportion some of their monetary resources with the sole purpose of motivating teachers monetarily.

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