

Review Article

Relationship Between Performance Appraisal and Productivity of Secondary School Teachers In Kisumu County

Odayo Frankline Onyango¹, Christine Anyango Bando², Johnmark Obura³

Maseno University

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Abstract - Productivity of an organization remains key in achieving its goals and objectives, and performance appraisal (PA) is a means of achieving productivity. Teacher productivity is a concern in Kenya, being below expectation with 32.23%, 15.41%, and 11.37% of students obtaining the minimum university entry qualifications (C+) in 2015, 2016, and 2017. Whereas the transition rates of students to the university are generally low, Kisumu County stands out with 20.12%, 13.43%, and 12.54% students in 2015, 2016, and 2017 respectively. Prior studies done around teacher productivity concentrated on aspects of PA like the tools and systems of appraisal but did not explore the effect of PA in terms of the process, feedback, and perceived procedural accuracy on teacher productivity. The purpose of this study was to determine the relationship between performance appraisal and productivity of secondary schoolteachers in Kisumu County. The study was guided by the two factors theory. A cross-sectional correlational survey design was employed on 1647 teachers, from which 312 teachers were selected using a simple random sampling technique. Data was collected using questionnaires and interview schedules. Reliability of the instrument was achieved test-retest where an overall reliability value of 0.81 was achieved whilst expert reviews were used to test the content validity. The study found that performance appraisal had positive and significant effects on teacher productivity ($R=.535$, $p=.000$). The study concluded that performance appraisal is vital for teacher productivity in schools within Kisumu County and recommended that performance appraisal be embraced in these schools and followed appropriately.

Keywords - Performance appraisal, productivity

I. INTRODUCTION

Performance appraisal has been defined in several ways by different authors. [11] defined performance appraisal as the process of identifying, evaluating, and developing the work performance of employees in the organization so that

the organizational goals and objectives are more effectively achieved, while at the same time benefiting employees in terms of recognition, receiving feedback, catering for work needs and offering career guidance. [5], defines performance appraisal as the formal process of observing and evaluating an employee's performance. According to [3], "Performance appraisal" is a discrete, formal, organizationally sanctioned event, usually not occurring more frequently than once or twice a year, which has clearly stated performance dimensions and/or criteria that are used in the evaluation process. Furthermore, it is an evaluation process in that quantitative scores are often assigned based on the judged level of the employee's job performance on the dimensions or criteria used, and the scores are shared with the employee being evaluated [3].

Most modern organizations rely upon some form of performance appraisal system to provide employees with feedback about their performance and to help the organization make decisions about such things as pay increases and promotions [1],[10],[16]. Research on performance appraisal dates back at least as far as the early 1920s and has continued to the present day. Therefore, it would seem reasonable to assume that practitioners could look to this research and find out how to design and implement performance appraisal systems that would help organizations improve individual performance. Yet this is not the case. In fact, practitioners continue to complain about how academic research in this area has been of limited usefulness and how academics continue to bemoan the state of affairs on the practice front [2], [21],[24].

Performance appraisal has gained popularity in schools as a systematic process of determining the merit, value, and worth of a teacher's current productivity and estimating his/her potential level of performance with further development [12]. This has been attributed to the lots of research done in this area by researchers and practitioners who have been interested in measuring human performance



for a long time [14]. The performance appraisal system can have a significant impact on the attitudes and behaviors of teachers, which in turn affect the performance of teachers and the learning outcomes of students. It has therefore been viewed as a critical process in schools for raising the competency of teachers and thereby the quality of education [26].

In the year 2012, the TSC introduced the Teachers performance Appraisal policy (TPA) in Kenyan schools as a departure from the previous annual confidential report. In this policy document, teachers in public schools were supposed to be appraised annually, with the appraisal period running from 1st January to 31st December every year. According to this new policy, the teachers are supposed to set targets at the beginning of the year negotiated by their respective Deputy Principals for the case of Assistant teachers and Principals for the case of Deputy Principals. The Principal would act as countersigning officers while Deputy Principals would be the appraisers. On the contrary, Deputy Principals would be appraised by Principals and countersigned by the staffing officer of the County (TSC, 2013). The policy was a total departure from the previous one, where principals would make an opinionated report on teachers without due process of assessing performance and discussing with the teachers concerned. In the policy document, the report covers all cadres of staff in the teaching service employed by the Teachers Service Commission. The teachers are evaluated on both set targets and behavioral attributes on a termly basis [1].

Empirical data linking performance appraisal and productivity have yielded mixed results. Some studies have concluded that performance appraisal has a strong and significant impact on productivity [12],[15]. However, other studies conducted especially on the education sector, have depicted a weak and insignificant relation [8],[13],[28]. No moderation attempts have been made to address these inconsistencies.

II. THE TWO-FACTOR THEORY

The two-factor theory was proposed by Frederick Herzberg, a behavioral scientist, in 1959. It is based on the notion that the presence of one set of job characteristics or incentives leads to worker satisfaction at work, while another and separate set of job characteristics leads to dissatisfaction at work. Thus, satisfaction and dissatisfaction are not on a continuum, with one increasing as the other diminishes, but are independent phenomena.

Hygiene factors are those job factors that are essential for the existence of motivation in the workplace. These do not lead to positive satisfaction in the long term. But if these factors are absent, if these factors are non-existent at the workplace, then they lead to dissatisfaction. In other words, hygiene factors are those factors which, when adequate/reasonable in a job, pacify the employees and do not make them dissatisfied. These factors are extrinsic to

work. Hygiene factors are also called dissatisfiers or maintenance factors, as they are required to avoid dissatisfaction. These factors describe the job environment/scenario [2]. The hygiene factors symbolized the physiological needs which the individuals wanted and expected to be fulfilled.

The payor salary structure should be appropriate and reasonable. It must be equal and competitive to those in the same industry in the same domain. The company policies should not be too rigid. They should be fair and clear. It should include flexible working hours, dress code, breaks, vacation. The employees should be offered fringe benefits that include health care plans (mediclaime), benefits for the family members, employee help programs. The working conditions should be safe, clean, and hygienic. The work equipment should be updated and well-maintained. The employees' status within the organization should be familiar and retained. The relationship of the employees with their peers, superiors, and subordinates should be appropriate and acceptable. There should be no conflict or humiliation element present. The organization must provide job security to the employees.

According to Herzberg, the hygiene factors cannot be regarded as motivators. The motivational factors yield positive satisfaction. These factors are inherent to work. These factors motivate the employees for superior performance. These factors are called satisfiers. These are factors involved in performing the job. Employees find these factors intrinsically rewarding [2]. The motivators symbolized the psychological needs that were perceived as an additional benefit. Motivational factors include Recognition; the employees should be praised and recognized for their accomplishments by the managers. Sense of achievement; the employees must have a sense of achievement. This depends on the job. There must be a fruit of some sort in the job growth and promotional opportunities; there must be growth and advancement opportunities in an organization to motivate the employees to perform well. Responsibility; the employees must hold themselves responsible for the work. The managers should give them ownership of the work. They should minimize control but retain accountability. Meaningfulness of the work; the work itself should be meaningful, interesting, and challenging for the employee to perform and to get motivated.

Because satisfaction and dissatisfaction are independent, there are four possible outcomes for company managers who try to influence employee behavior: High satisfaction + low dissatisfaction = employees have few complaints and are highly motivated, high satisfaction + high dissatisfaction = employees have many complaints but are highly motivated. Low satisfaction + low dissatisfaction = employees have few complaints but are not motivated. Low satisfaction + high dissatisfaction = employees have many complaints and are not motivated

This theory can be applied to the case of teachers due to their varying age, marital status, rank, health status, and experience. For example, a motivated sick employee might feel dissatisfied because of his health status, while a healthy motivated person feels more satisfied. Other factors might determine satisfaction and dissatisfaction levels, too, for example, organization culture, management style, etc. In an environment where employees are unsure of their job security, managers can try to mitigate the demotivating effect by providing open communication and by reassuring employees about the situation.

III. LITERATURE REVIEW

[12], Studied the influence of performance appraisal on employee productivity in organizations: A case study of selected WHO offices in East Africa. For the purpose of the study, a descriptive design was adopted. The study population was the 410 employees of the World Health Organization of Kenya and Sudan Country Offices and Garissa sub-offices. Stratified sampling was used to select the sample of the study. A sample size of 105 was used in this study. The data was gathered through the use of questionnaires to collect both quantitative and qualitative information while the top management was interviewed. Secondary data was collected from the WHO website and manuals [12]. The study found out that most employees preferred graphic rating scales to behaviourally anchored rating scale systems. It also found out that management by objective (MBO) was an effective management system.

This study concentrated on the performance appraisal systems. It looked at the graphic rating scale (GRC) and the behaviorally anchored rating scale (BARS). While concluding that performance appraisal provided an opportunity for identification of training needs and improvement areas, it did not undertake any research on this. The research in its entirety was a comparison between the Graphic rating scale and the behaviorally anchored scale, concluding that 79% of the employee preferred the graphic rating scale to the behaviorally anchored rating scale. The study also looked at Management by objective and concluded that most employees preferred it as a management system. Mwema and Gachunga's study, therefore, missed the entire important components of Performance appraisal. It similarly fails to study any component of productivity. This current study proposed to deal with performance appraisal in its entirety and consider the effects that it has on employee productivity.

[15] Studied the effects of performance appraisal (PA) on employee productivity in Mumias Sugar Company Limited in Kenya. The study was a case study design and targeted a total of 877 Unionisable employees, 422 supervisory level employees, 182 middle-level management, and 9 top-level management. She used simple random sampling to select 149 employees. The research instruments used for data collection were the questionnaires and interview schedules. The

research sought to investigate the effect of performance appraisal on service quality at Mumias Sugar Company Limited in Kakamega County and to find out the effect of performance appraisal on customer satisfaction at Mumias Sugar Company Limited, Kakamega County [15]. Regression analysis conducted on the effect of performance appraisal and service quality revealed a positive and significant correlation between these two variables. This signified that PA if conducted well in an organization, leads to improved service quality. Study findings also showed that PA had a positive and significant association with customer satisfaction, and this indicated that there was a positive and significant relationship between these two variables [15]. From the study, it was recommended that the Human Resource teams create policies along with performance management programs that have a positive correlation with employee productivity and hence overall organizational improvement and to engage employees in constructive goal forming sessions so that expectations are matched while performance appraisal is done. It was also recommended that the Human Resource Department should provide feedback after PA has been conducted since lack of PA feedback can cause a negative attitude towards the appraisal system. The study finally noted that the findings had managerial implications for training, motivation, and provision of resources for effective PA so that the process of PA is conducted fairly and objectively [15]

Omusebe[15] considered performance appraisal as a whole package. In the study, they left out the fundamental process of criteria and the standards applied. The study further only looked at the feedback component of the appraisal. The study looked at customer satisfaction as the only component of the measure of an employee's productivity. But the satisfaction of a customer was not shown to have a direct dependency on individual employees' efforts. The satisfaction could be as a result of other components of the company independent of the individual employee. The study did not demonstrate the value addition of each employee or the volume of sales that is a fundamental component of productivity. This study sought to study the criteria, standards, feedback, and satisfaction as components of performance appraisal and weigh it against specific productivity on an individual employee.

[8] Studied the Teachers' perceptions of the role of performance appraisal in enhancing teaching and learning: a case of public secondary schools in Kiambu County, Kenya in 2014. The study was guided by the Performance Appraisal Model by Yee and [2]. The objectives of the study were: to establish the nature and types of tools used in teachers' performance appraisal; to find out how performance appraisal has enhanced teaching and learning; to establish the challenges and issues in teachers' performance appraisals and to find out teacher characteristics affecting teachers' performance appraisal, like gender and qualifications. The

research adopted a descriptive research design targeting all the 3,457 teachers and 225 head teachers employed by the Teachers' Service Commission (TSC) in the 225 public secondary schools in Kiambu County [8].

The study also established that the most common hindrances to effective performance appraisal were; some teachers viewed the process of performance appraisal as a tool for victimization and intimidation, teachers were not ready to admit their weakness, and instead, they blamed students, school heads had a fear of categorizing teachers and students can get biased towards their teacher. The study further established that both male and female teachers' did not differ significantly in their responses on performance appraisal, and there was a significant relationship between teachers' work experience, academic qualification, and teachers' responses on performance appraisal [8].

The study findings revealed that the majority (71.4%) of the principals were not aware of the action to take after evaluating teachers' performance. Over 50.0% of them further reported that; some teachers viewed the process of performance appraisal as a tool for victimization and intimidation (65.7%), teachers are not ready to admit their weakness, and instead they blame students (60.0%) and school heads had a fear of categorizing teachers (54.3%). This shows that the majority of the teachers had negative perceptions towards performance appraisal methods applied by the principals in their respective schools.

[8] Concentrated on the perception of the teachers towards performance appraisal. It did not study the extent to which the appraisal affected the individual's productivity. The study, however, noted that The major challenge which hindered performance appraisal was teachers' perception that performance appraisal was a tool for victimization and intimidation and recommended that other studies should be conducted to investigate whether there are school and community factors that affect performance appraisal. This current study sought to move further and look at the standards and criteria of performance appraisal, the appraisal feedback, and satisfaction of the appraisal process.

[13]Carried out a study on staff appraisal systems and their effect on teacher performance in Aga Khan Schools in Kampala District. The research was guided by two objectives which aimed at establishing the relationship between teacher-based evaluations on teacher performance and establishing the relationship between the school evaluation criteria on teacher performance. It used a cross-sectional approach where 78 teachers were used in the study. It was noted that emphasis was lacking on teacher-based evaluations. The school's evaluation criteria lacked more detail, organization, and emphasis on individual activities. It was, therefore, necessary that emphasis be put on the appraisal process whereby teacher evaluations would be given priority so that teachers feel empowered. In addition, the general school's evaluation needs to be detailed enough in order to measure

practical and specific items of performance, and also collective action was needed to improve the transparency of the system.

Namuddu's study was basically a comparison of the teacher-based performance evaluations and school evaluation criteria. It concluded that the criteria lacked details, and no emphasis was put on teacher-based evaluations. This current study intended to determine the effect of the current performance appraisal criteria and standards on productivity. It intended to look at the entire appraisal process to its conclusion, including feedback and satisfaction.

[1]Studied the effectiveness of Teachers' Performance in Secondary Schools. The methods used include qualitative and quantitative approaches to collect and analyze data. The study reported that there was poor feedback management, where appraisal results are not used for staff promotion, professional development, or determining remunerations. Poor feedback has also bred into negative results like demotion, abuse, and reduced salary. All the above have therefore resulted in staff failing to fill appraisal forms, or when filled, they fail to submit them to the Ministry of Education to use the appraisal results for staff promotion, job improvement, and counseling sessions to improve staff competence.

The reviewed study was carried out in schools within the municipality in Uganda, while the current study will be carried out in public schools within Kisumu County, Kenya and both countries have dissimilar education systems. Akampurira concentrated on feedback. It did not consider the appraisal in its entirety, leaving out standards, criteria, and satisfaction. The current study intended to look at all these dimensions from a wider perspective.

[14]A study in Bungoma County, Kenya, indicated that the TSC performance appraisal system is not adhered to during the appraisal as stated in the TSC manual on performance appraisal. Aspects like self-appraisal, joint objective setting, and providing feedback are not carried out as stated in the manual on performance appraisal. From the study, it is recommended that the TSC should train the principals on how to effectively carry out Performance Appraisal, especially delivering feedback to the appraisers and encouraging teachers to carry out a self-appraisal. The study only focused on principals, while the current study focused on all cadre of teachers, from principals to assistant teachers. In addition, the former study was carried out in Bungoma County, while the current study will be carried out in Kisumu County. The current study integrated conceptual and theoretical frameworks to guide it, while the former study only used a theoretical framework.

[9]Studied effects of teacher appraisal on effective curriculum implementation among teachers in Australia. Teachers were found to be lagging behind in vital areas of curriculum implementation. The study revealed that student performance had stagnated in Mathematics and fallen sharply

in reading. The study further revealed that more effective teachers are the key to producing higher-performing students. The conservative estimates revealed that students with a highly effective teacher learn twice as much as students with a less effective teacher. The study further revealed that the Australian system of teacher appraisal and feedback is broken, and students are suffering as a result. The study recommended the need for change because the pace of syllabus coverage is low. This study, however, focused on the implementation of Teacher appraisal policy on curriculum implementation in public secondary schools in Kenya. In addition, the present study bridged the knowledge gap by using both qualitative and quantitative techniques in data analysis while [9] relied on quantitative techniques only, which lacked Qualitative in-depth data. Furthermore, the system of education and curriculum in Australia is arguably different from the one in Kenya. The study used a balanced scorecard as a tool to determine performance, while the present study used a performance appraisal guide already developed by the Teachers Service Commission.

[17]Investigated the effect of appraisal system on employee productivity in Niger Delta University. The methodology employed was a survey study design. The population of the study comprises about 3478 Academic and non-academic staff. In the course of the investigation, an instrument used was a self-developed questionnaire distributed to 104 respondents, of which 102 were retrieved. There was a significant relationship between performance appraisal and employee productivity, and that effective appraisal system could boost the morale of workers, especially when they are rated adequately. The findings also revealed that performance criteria also affect the relationship between performance appraisal and employee productivity. The study established that performance appraisal provides an opportunity to identify staff training needs, therefore, providing them the necessary training, helps employees meet performance targets in the organization, offers poor performers a chance to improve, helps employees on time management through planning and setting of deadlines, managers to make informed decisions about promotions and assignments based on applicable facts, improves employee's synergies.

There viewed study investigated the effect of the appraisal system on employee productivity in Niger Delta University, while the present study explored the influence of teacher performance appraisal among public secondary schoolteachers in Kenya. One considered performance appraisal in its entirety. The study did not look at the individual components of performance appraisal that would affect the productivity of an individual employee. It did not consider the inputs to the system of productivity, and neither did it consider the outputs of the system. This current study intended to consider the individual components of appraisal, the inputs, and the outputs of the system, as well as looking at the feedback and satisfaction with the process.

[17]Examined the impact of performance appraisal on employees' productivity in the Nigerian banking industry, with a sample of one hundred and ninety-five (195) drawn from banks with branches in Ado Ekiti. They employed regression analysis for data analysis and F-statistics for the hypothesis testing and found out that sound management of performance appraisal (PA) system will guarantee good employee productivity, with an R-value of 0.842, adjusted R² of 0.701. That is, a very strong and positive relationship exists between performance appraisal and employee productivity. Also, a very good PA system will explain 70% of the degree of changes in employees' productivity. The F-ratio statistics was 86.268. The study concluded that, for Nigerian banks to earn sound employees' performance, a conscious effort towards an improved Performance Appraisal system is required. [17]

[28]Studied the effects of performance appraisal on employee productivity in 2012. Their study took a case study of Supermarkets in Nakuru Town. The purpose of this study was to establish the impact of performance appraisal criteria, feedback, reward, and frequency of appraisals on employee productivity in these supermarkets. This study employed a cross-sectional survey design. The population of the study was 1560 employees distributed among the 7 main supermarkets operating in Nakuru Town. A sample of 308 respondents was selected using a multi-stage sampling technique. 178 filled questionnaires were returned. Multiple regression models were used to analyze the data collected[28]. The study concluded that "It is quite interesting to note that employees realize little benefit after a performance appraisal. Further, where performance appraisal indicates negative results and establishes some weaknesses, the employees are agreed to a low extent that they are taken for further training. There is the little reward as far as performance appraisal is concerned. From regression analysis and testing of the study hypotheses, it was found out that criteria, frequency of appraisal, and feedback significantly explained variation in employee productivity. However, the study found out that employee reward does not significantly explain variation in employee productivity. It appears that there are no significant benefits employees get after an appraisal has been conducted. The purpose of the appraisal needs to be investigated" [28].

From the reviewed studies above, a significant shift in results is, however, noted when the studies of performance appraisal are conducted in the education sector. Iraki Margret is studying the Teachers' perceptions of the role of performance appraisal in enhancing teaching and learning: a case of public secondary schools in Kiambu County notes that findings revealed that the majority (71.4%) of the principals were not aware of the action to take after evaluating teachers' performance. Over 50.0% of them further reported that; some teachers viewed the process of performance appraisal as a tool for victimization and

intimidation (65.7%), teachers are not ready to admit their weakness, and instead they blame students (60.0%) and school heads had a fear of categorizing teachers (54.3%). This shows that the majority of the teachers had negative perceptions towards performance appraisal methods applied by the principals in their respective schools. The study noted that the major challenge which hindered performance appraisal was teachers' perception that performance appraisal was a tool for victimization and intimidation [13].

This study raises several issues on why the performance appraisal was not effective in secondary schools. It points out teacher perception as a major hindrance. It indicates that something should be done to change this perception. In the study, the principal agents of the appraisal process, who are the principals, were rarely engaged in the appraisal and instead delegated the appraisal, some even to the students. It pointed out that the academic qualification and the teaching experience were major factors that influenced the teacher's attitude towards performance appraisal. Finally, the study found out that the appraisals lacked a follow-up effect. There was rarely a direct influence of the appraisal results on the career development of the teacher [13].

[12]while studying the influence of performance appraisal on employee productivity in organizations, conclude that there is a significant positive relationship between performance appraisal and productivity [12]. The sentiments of [12]are a reflection of the study that Omusebe carried out in Mumias sugar company employees [15].While he indicates that performance appraisal greatly influenced employee productivity, they note that the findings from the interview

schedules indicated that some employees were unable to obtain feedback after PA was conducted. This could explain why the regression values were lower than 0.5, an indication of some dissatisfaction among employees [15] Namuddu, while concluding that performance appraisal significantly influenced teachers performance, noted that the schools' evaluation criteria were based on a designed appraisal grid/rubric that had different categories of rating points based on major elements of a personal presentation (appearance), schemes of work, lesson plans, employee relations, and classroom performance. She, therefore, concludes that "the evaluation criteria lacked more detail, organization, and emphasis of individual activities such as; Actual teaching, public relations/employee relations and extra school activities" [13].

These studies, while making the conclusion of a positive relationship between performance appraisal and employee productivity, raised serious concerns like an employee being unable to get feedback, evaluation criterion lacking in details [15]; [13]. When a similar study is carried out in the Education sector by [28] and [8] They both conclude that performance appraisal and an insignificant effect on teacher productivity. The study by [28] concluded that "It is quite

interesting to note that employees realize little benefit after a performance appraisal, there is the little reward as far as performance appraisal is concerned. It appears that there are no significant benefits employees get after an appraisal has been conducted. The purpose of the appraisal needs to be investigated" [28]. The same conclusion is reached by Iraki (2014) whose raises several issues on why the performance appraisal was not effective in secondary schools. It further points out teacher perception as a major hindrance. "Something should be done to change this perception. The study the principal agents of the appraisal process who are the principals were rarely engaged in the appraisal and instead delegated the appraisal, some even to the students"[8]. Iraki found out that the appraisals lacked a follow-up effect. There was rarely a direct influence of the appraisal results on the career development of the teacher.

Studies on performance appraisal and productivity have majorly focused on systems of appraisal. While [12] focused on the appraisal systems, Nyongesa (2014) also focused on the systems and aspects like self-appraisal and joint objective setting. Omusebe, on the other hand, studied the process as a whole. [8]concentrated on the nature of the tools that were used for appraisal. [13]similarly, studies the appraisal systems concentrate on teacher-based evaluations. [1]only considered feedback on his study. All the reviewed studies have not brought out the effects of performance appraisal of productivity.

IV. DATA AND METHODOLOGY

This study adopted a cross-sectional correlational survey design. This design was expected to test the hypotheses and meet the objectives of the study. Cross-sectional surveys have been used in previous studies dealing with performance appraisal and performance Serut (, 2013). According to Good(1963), the purpose of survey research design is to secure information and evidence on existing situations and to identify ways to compare present conditions in order to plan how to take the next step. The target population of the study was 1647 secondary school teachers in Kisumu County, 12 principals, six SCQAOs, and SCEO, from which a sample of 312 was obtained through a simple random sampling method by lottery way from the 254 schools that participated in the study and purposive sampling, was used to select the SCEO and SCQAOs. Data collected was analyzed quantitatively using descriptive statistics such as means, frequency counts, and percentages to compare variables numerically and ascertain a pattern in the data set. Further inferential statistics, Chi-square test at 95% confidence interval will be used to compare the difference between categories frequencies when data is categorical and drawn from a population with a homogenous distribution (Oso and Onen, 2009). To achieve the study objectives, the study will measure the degree of association.

The study adopted a multiple regression model to determine the relationship between the variables of the study (adopted from Aiken and West, 1991); such that:

$$Y_i = 5.114 + \beta_1 X_{1i} + \beta_2 X_{2i} + \beta_3 X_{3i} + \varepsilon_i$$

Where:

Y_i is the dependent variable (Teacher productivity)

X_{1i} is the Standards and criteria

X_{2i} is the feedback

X_{3i} is the Satisfaction

β_0 is the constant or intercept

$\beta_{i(i=1,2,3)}$ is the regression coefficients or change induced in Y by each X

ε_i is the Error assumed to have a normal distribution and constant

V. RESULTS AND DISCUSSION

The objective of the study sought to determine the relationship between performance appraisal and productivity of secondary school teachers in Kisumu County. To achieve this objective, the researcher first sought to find out teacher productivity. Their responses were measured on a five-point Likert-type scale. Some of the aspects they were questioned on included: the number of students who scored higher grades in KCSE than in KCPE, the number of students who qualified to join University, Diploma Colleges, and certificate Colleges after KCSE. The study findings were presented using frequencies and percentages, as shown in Table 1

Table 1. Teacher productivity

Questions	0%-25 %	26%-50%	NOT SURE	51-75%	76-100%
	1	2	3	4	5
What percentage had a higher grade in KCSE than KCPE	163(53.1)	91(29.6)	19(6.2)	22(7.2)	12(3.9)
What percentage qualified to join University after KCSE	134(43.6)	81(26.4)	17(5.5)	38(12.4)	37(12.1)
What percentage qualified to join Diploma colleges after KCSE	90(29.3)	87(28.3)	39(12.7)	45(14.7)	46(15.0)
What percentage qualified to join certificate collages after KCSE	58(18.9)	76(24.8)	42(13.7)	72(23.5)	59(19.2)

Source: Research data (2019)

From table 1, the study findings revealed that in most of the schools 163(53.1%), only (0-25)% of the students scored a higher grade in KCSE than KCPE, in 91(29.6%) schools, (26-50)% students scored a higher grade in KCSE than in KCPE, in 22(7.2%) schools, a high percentage (51-75)% students scored a higher grade in KCSE than in KCPE while few schools 12(3.9%) had the highest number of students (76-100)% with a higher grade in KCSE than in KCPE. It was evident from these responses that few schools had high percentages of students with higher grades in KCSE than in KCPE, while in the majority of the schools, few students scored higher grades in KCSE than in KCPE. In addition to these findings, it was revealed that in most schools, as shown by 134(43.6%) respondents, a small percentage of students (0-25) qualified to join university after KCSE, in 81(26.4%) schools, (26-50)% students qualified to join the University after KCSE, in 38(12.4%) schools, there were (51-75)% students who qualified to join University while in a few schools as shown by 37(12.1%) respondents, (76-100)% students qualified to join the University. The study findings also revealed that in most schools in Kisumu County; 90(29.3%) schools had (0-25)% students proceeding to Diploma Colleges, 87(28.3%) schools had (26-50)% students proceed to Diploma Colleges and 45(14.7%) schools had (51-75)% students proceed to Diploma Colleges while

46(15.0%) schools had (76-100)% students proceed to Diploma Colleges. From these responses, it was shown that in most schools in Kisumu County, an average number of students were proceeding to Diploma Colleges as compared to schools where students proceeded to the University. Lastly, from the study findings, it was evident that the schools where students proceeded to Certificate Colleges after KCSE were evenly distributed in Kisumu County. For instance, in 58(18.9%) schools, (0-25)% students proceeded to certificate Colleges, in 76(24.8%) schools, (26-50)% students proceeded to certificate Colleges, in 72(23.5%) schools, (51-75)% students proceeded to certificate colleges and in 59(19.2%) schools, (76-100)% students proceeded to certificate colleges.

In general, from the study findings, teacher productivity was below average in most secondary schools in Kisumu County. This was shown by the majority of the schools having a small percentage of students score higher grades in KCSE than in KCPE, while few schools had a high percentage of students score higher grades in KCSE than in KCPE. Moreover, in many schools, more students proceeded to Diploma and certificate Colleges as compared to those who proceeded to the University. The study findings in table 4.2 showed that even if performance appraisal strategies

were in place, PA was not embraced or valued by the majority of the teachers because they did not have an understanding and satisfaction of the appraisal systems, and neither were the systems fair, effective nor did they bring out the expected outcome. From these results, there seemed to be a relationship between PA and Teacher productivity. Because of this, it was necessary to determine if there was any relationship between performance appraisal and teacher productivity. A linear regression model was used to carry out the analysis whereby the independent variable was performance appraisal while the dependent variable was teacher productivity.

However, before doing the regression analysis, a multi-collinearity test was done to find out if the dependent and independent variables were highly correlated (correlation of .80 and .90), as stated by Cohen J. W. (1998). Tabachnick, B. G., & Fidell, L. S. (2001) averred that the simplest way to test for multicollinearity is by testing for correlation between the dependent and the independent variables, then checking for the strength of the relationship, if it is .8 or .9, it will be a reason for concern. Therefore, table 2 shows the results for the multi-collinearity test between the PA and teacher productivity.

Table 2. Multi-collinearity results for PA and teacher productivity

		PRODUCTIVITY	PA
PRODUCTIVITY	Pearson Correlation	1	.535**
	Sig. (2-tailed)		.000
	N	307	307
PA AUG	Pearson Correlation	.535**	1
	Sig. (2-tailed)	.000	
	N	307	307

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

From the study findings in table 2, it was revealed that there was no high correlation between PA and teacher productivity; that is in reference to the stipulation by Cohen J. W. (1998) and Tabachnick, B. G., & Fidell, L. S. (2001) who said that there is multi-collinearity if a relationship of .8 or .9 is revealed. In the case of this study, the relationship

between PA and teacher productivity was $R=.535$, $p=.000$. Therefore, there was no reason for concern. Hence regression analysis was conducted.

For regression analysis, the mean of teacher productivity was regressed against the mean of performance appraisal and the summary findings presented as shown in table 3

Table 3. Regression model on the effect of performance appraisal on teacher productivity

Model Summary									
Model	R	R Square	Adjusted R Square	Std. An error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.535 ^a	.286	.284	3.53292	.286	122.418	1	305	.000

a. Predictors: (Constant), PA

Source: Research data (2019)

The study findings in table 3 indicate the relationship between performance appraisal and teacher productivity. The model summary shows that there was a strong positive and significant correlation between performance appraisal and teacher productivity in schools in Kisumu County ($R=.535$, $p=.000$). This is an implication that if performance appraisal is reinforced and conducted well in the schools in Kisumu County, teacher productivity will improve, and if the performance appraisal is not reinforced, then teacher productivity will be poor. From these findings, it is clear that performance appraisal is very vital for teacher productivity to be realized; students' performance would improve whereby

there will be a valuable addition to them, and many of them will proceed to the university or other higher learning institutions.

In addition to that, performance appraisal accounts for a 28.6% change in teacher productivity ($R\text{ Square}=.286$). An adjustment of the R square value after shrinkage, which is also a control of underestimation or over-estimation of the R square value, revealed a value of 0.284. This implied that there was a difference of 0.002, which is 0.2%, thus a small adjustment to show the true population estimate. The findings are significant ($p=.000$, implying that the overall model was well fit and the results are not by chance. Hence,

with other factors remaining constant, performance appraisal is a significant factor for teacher productivity

The study further sought the effect of performance appraisal on teacher productivity through the standardized

coefficient values from the resulting output. The results indicated the unique contribution of the independent variable to the dependent variable. The findings were presented as shown in Table 4.

Table 4. Unique contribution of performance appraisal on teacher productivity in Kisumu County schools

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	7.179	.908		7.905	.000
	PA	.126	.011	.535	11.064	.000

a. Dependent Variable: PRODUCTIVITY

Source: Research data (2019)

From table 4, the study findings revealed that performance appraisal has a strong, positive, and significant unique contribution to teacher productivity ($\beta=.535$, $p=.000$). This implies that performance appraisal has an effect on teacher productivity, such that the more performance appraisal is reinforced, the better the teacher productivity. The established regression equation for predicting teacher productivity from performance appraisal was:

$$Y = 7.179 + 0.126X + \epsilon$$

The regression equation above established that taking into account performance appraisal to be constant at zero, there were other factors that contributed to teacher productivity (7.179). But with PA included, 1 standard deviation improvement in PA leads to 0.126 improvements in teacher productivity. Therefore, it was concluded that performance appraisal is a vital process that should be done in all schools in Kisumu County in order for teachers to perform well in terms of value-added to students and the number of students proceeding to university.

Qualitative findings were also included to show the effect of performance appraisal on teacher productivity in secondary schools in Kisumu County. The quotes below reflect the findings:

“Ever since I began doing performance appraisal in my school, teacher productivity has greatly improved. I have seen value addition to students, and the number of students proceeding to university has increased a little bit.” Principal 15

“In the schools where performance appraisal is embraced, I have witnessed a great improvement in teacher productivity. This has been shown by the slightly increased number of students proceeding to the University.” SCDE

“I have no doubt that performance appraisal has had a positive impact on the productivity of most of the teachers in my school. There is a big difference to their performance

before and after performance appraisal strategies were put in place and followed appropriately.” Principal 9

These study findings are similar to those by [12], who, while studying the influence of performance appraisal on employee productivity in organizations, concluded that there is a significant positive relationship between performance appraisal and productivity [12]. Similarly, [17] discovered a very strong and positive relationship between performance appraisal and employee productivity. The current study findings also concur with the findings by [18], who found out that there was a significant relationship between performance appraisal and employee productivity and that an effective appraisal system could boost the morale of workers, especially when they are rated adequately. The findings also revealed that performance criteria also affect the relationship between performance appraisal and employee productivity. The study established that performance appraisal provides an opportunity to identify staff training needs, therefore, providing them the necessary training, helps employees meet performance targets in the organization, offers poor performers a chance to improve, helps employees on time management through planning and setting of deadlines, managers to make informed decisions about promotions and assignments based on applicable facts, improves employee’s synergies. However, the study findings contradicted with [28], who said, “It appears that there are no significant benefits employees get after an appraisal has been conducted and therefore the purpose of the appraisal needs to be investigated” and [13], according to whom there was rarely a direct influence of the appraisal results on the career development of the teacher.

This study brings out clearly the importance of PA on teacher productivity while the previous studies done prior like the studies by [22] and Namuddu (2010), to whom it was not clear if PA affected employee performance

CONCLUSION

The objective of the study sought to determine the relationship between performance appraisal and productivity of secondary school teachers in Kisumu County. From the study findings, it was revealed that there existed a strong, positive, and significant relationship between performance appraisal and teacher productivity. This is an implication that if performance appraisal is reinforced and conducted well in the schools in Kisumu County, teacher productivity will improve, and if the performance appraisal is not reinforced, then teacher productivity will be poor. In addition to that, performance appraisal accounts for a 28.6% change in teacher productivity and contributes positively and strongly to teacher productivity. This implies that performance appraisal has an effect on teacher productivity, such that the more performance appraisal is reinforced, the better the teacher productivity. From these findings, it was clear that performance appraisal is very vital for teacher productivity to be realized; students' performance would improve whereby there will be a valuable addition to them, and many of them will proceed to the university or other higher learning institutions.

Having discovered the existence of a strong, positive, and significant relationship between performance appraisal and teacher productivity, it was concluded that performance appraisal is important if teacher productivity should be realized in the schools in Kisumu County. Further, the study recommends that performance appraisal should be reinforced and embraced in all schools in Kisumu County in order to have improved teacher productivity where more students will proceed to universities, unlike the few who manage to proceed to university at the moment. These appraisal systems should be fair, effective and bring out the expected outcome.

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