

Original Paper

Relationship between Students' Involvement in Decision-Making and Academic Performance in Public Secondary Schools of Kenya

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Received: April 6, 2021

Accepted: April 28, 2021

Online Published: May 3, 2021

doi:10.22158/iess.v1n2p1

URL: <http://dx.doi.org/10.22158/iess.v1n2p1>

Abstract

Secondary school principals play a key role in decision-making leading to students' academic performance. There was a decline in the percentage of the examination candidates from Kakamega County who were selected to join public universities from the year 2011 to 2015. This study intended to establish the relationship between students' involvement in decision-making by principals and academic performance. Respondents were sampled by simple random sampling. Pre-testing of instruments of data collection was undertaken to ensure validity and reliability of the instruments. Data was collected from 36 principals, 199 teachers and 393 Form 4 students by use of questionnaire and interview schedule. Research experts determined validity of the instruments. Data was analyzed using descriptive statistics, frequencies, percentages, means, cross tabulation and Pearson's correlation. Hypotheses were tested through regression analysis at 0.05 level of significance. Regression analysis revealed that students' involvement in decision-making explained 24.6%, and of the variation in academic performance. Leadership functions such as students allowed to elect prefects, prefects attending staff/BoM meetings. It was recommended that principals should involve students in decision making. This study would be significant to policy makers, principals, teachers and other education stakeholders in Kenya. The study would also form baseline information for future research.

Keywords

leadership, students' involvement, decision-making, students' academic performance

1. Introduction

1.1 Background to the Study

The education system in Kenya is largely examination oriented. Kenya is ranked 17th out of 54 countries in terms of efficiency in education sector based on students' performance, staff turnover, motivation and managerial competence (World's Competitiveness Report, 2009). Educational leadership in the 21st Century is expected to be focused for purpose of realizing the SDGs and Kenya's vision 2030. This requirement necessitates a leadership that is clearly defined for all involved. Leadership involves authority and responsibility in terms of deciding the way forward and being held responsible for the success or failure of achieving the agreed objectives. In a constantly changing social, economic, and technological environment, leadership is a more important attribute of management today than before (Musera, Achoka, & Mugasia, 2012). The quality of education tends to be evaluated in terms of the number of students passing national examinations (Fatuma, 2003). Today, the demand for effective management of schools world over is rapidly taking centre stage more than ever before. This effectiveness is judged by the extent to which schools acquire the necessary instructional materials and teachers and how they provide a congenial organizational climate and generally meet the expectations of the society within which they are established (Okumbe, 1999). Therefore, the overall management of school rests with the principal working with and through the teachers to maximize their capabilities in the profession and achieve the desired educational goals.

The principals' visionary and moral contributions are expected to give teachers direction and the ability to perform in school. The principals have the endowment to create such conditions. Many scholars have attributed, to a large extent, the success of schools to those in the helm of leadership (principals) (Wanderi, 2010; Wangara, 2008; Yusof, 2012). School principals have a responsibility of removing administrative constraints that may prevent teachers from maximizing their efforts in rendering services to students. It is vital to note that teachers are key players in the school and the major determinants of school performance. Management of teachers in schools is bestowed upon principals who have a responsibility of making and enhancing every teacher's productivity (Government of Kenya, 2007). These responsibilities can be carried out more effectively with proper leadership functions for school leadership. According to Nandwah (2011), education stakeholders in Kenya have very high expectations of public secondary school principals because they believe that the success of a school is measured in terms of good performance in national examinations and the person responsible for this is the principal.

World Bank (2008) observes that the increase in secondary education necessitates instituting responsible leadership in secondary education institutions. Performance of the academic institutions in meeting the goals and objectives of education in Kenya relies heavily on the type of leadership that prevails in the institutions and that many schools still perform poorly due to poor leadership. According to Mobegi, Ondigi, and Oburu (2010), the quality of principals is a relevant indicator of quality in schools and therefore underscored the importance of head teachers in school administration. To this

extent, the Ministry of Education introduced a Diploma in Educational Management for head teachers and principals. The course administered by the Kenya Education Management Institute (KEMI) is meant to equip the school managers with requisite skills to manage and implement educational policies in a contemporary education sector (MoE, 2011). According to Lumosi and Mukonyi (2015), performance in the KCSE national examinations gives a picture of the level and quality of education. Kenyans who have a stake in education expect schools to be effective and successful in a bid to achieve the educational goals. To effectively run a school, the principal is central in setting the tone of the school by employing various management styles, which ensures effective teaching and learning by teachers and students respectively. One of the hailed leadership skill is participatory where subordinates have a stake in decision-making, there is good communication and delegation of responsibility and authority (Mobegi, Ondigi, & Oburu, 2010). The delegation can be to the teachers, staff or students. This study therefore sought to establish the relationship between students' involvement in decision-making and academic performance in Kakamega County of Kenya.

1.2 Statement of the Problem

Kenya like other countries is in the race to attaining Sustainable Development Goals (SDGs) alongside its Vision 2030 when it is expected to be an industrialized nation. Secondary schools continue to face pressure to attain these set standards and there are continuous efforts to improve student academic performance (World Bank, 2008). Quality education in Kenya and world over is measured in terms of performance in examinations among other aspects. At the same time, Anami and Okwach (2014) reported that Kakamega County Director of Education blamed teachers for forcing students to repeat which discouraged them since their efforts were not recognized. Furthermore, Siringi (2005) indicates that many education stakeholders, professionals and educationists have always attributed school KCSE exam performance to head teachers' leadership effectiveness. The results of such examinations are used to competitively select students for enrolment to higher education institutions. The percentage of the KCSE candidates who were selected for public university admission in the years 2011, 2012, 2013, 2014 and 2015 was 15.53%, 14.84%, 13.47%, 12.61% and 12.24% respectively. This shows that there was a decline in the percentage of the KCSE candidates from Kakamega County who were selected to join public universities contrary to the national increasing trend which shows that 7.18%, 9.12%, 10.17%, 12.11% and 12.72% of the KCSE candidates in the year 2011, 2012, 2013, 2014 and 2015 respectively were selected to join public universities. The problem of declining performance in examinations is costly for any country and especially Kenya since education is a major contributor to economic growth. This trend if allowed to go on may easily hinder the realization of SDGs and the Kenya's vision 2030. This study therefore sought to establish the relationship between students' involvement and academic performance in public secondary schools in Kakamega County of Kenya.

1.3 Objective of the Study

The objective of this study was to establish the relationship between teachers' and students' involvement in decision-making and academic performance in public secondary schools in Kakamega

County.

1.4 Research Hypothesis

The study was guided by the following hypothesis:

Ho₁. There is no significant relationship between students' involvement in decision-making and academic performance in public secondary schools in Kakamega County.

1.5 Scope of the Study

This study covered the relationship between students' involvement in decision-making and academic performance in public secondary schools in Kakamega County, Kenya. The study involved principals, teachers and Form 4 students as respondents. Data was collected by use of questionnaire and interview schedule.

1.6 Limitations of the Study

Since the study touched on the principal who was the chief executive officer in the school, some respondents were hesitant to give information and others were suspicious of the outcome of the study and therefore remained guarded in giving information in fear of victimization or discipline from the principal. This was overcome by the researcher informing them that the information was for the purpose of research only and would be treated with utmost confidentiality. In addition, it was overcome by corroborating data collected from different respondents. At the same time, to control the intervening variables, the researcher employed random sampling technique and collected data from a large proportion of respondents.

1.7 Significance of the Study

This study was expected to provide valuable insights on students' academic performance in public secondary schools to researchers in the education sector who can use the research findings to analyze the relationship between students' involvement in decision-making and academic performance in secondary schools in Kenya. This knowledge may also be used in evaluating the success of principals as leaders and provide information to policy makers and implementers who can use the information in designing strategies that can be used to enhance students' academic performance by appointing appropriate teachers to become principals. The findings of the study may also provide the stakeholders in education with data on how academic activities in secondary schools are being managed and in turn, the Government through the Ministry of Education may use the findings of this study to develop in-service training programmes at Kenya Education Management Institute (KEMI) that may help the principals adopt appropriate mechanisms of involving students in decision making in order to enhance students' academic performance. The study may also form baseline information for future research.

1.8 Conceptual Framework

A conceptual framework that shows the interaction of variables in the relationship between students' involvement in decision making and students' academic performance in public secondary schools in Kakamega county of Kenya guided this study. The framework shows the indicators in the independent, intervening and dependent variables.

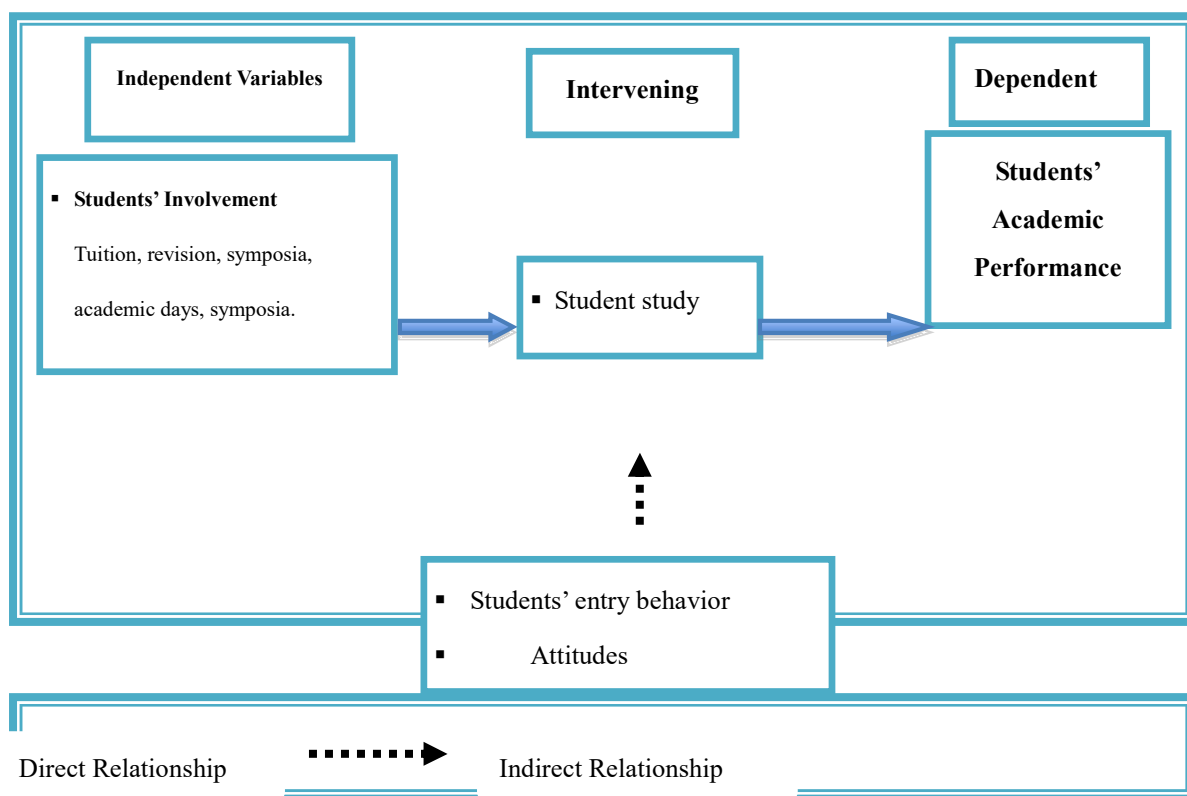


Figure 1. Relationship between Students' Involvement in Decision-Making and Academic Performance

Figure 1 displays interaction of variables between students' involvement in decision making and students' academic performance. The independent variable of the study was students' involvement in decision-making. This influences students study habits that in turn influence the dependent variable that is students' academic performance that was measured by the mean scores in KCSE examination. However, independent and dependent variables do not occur in a vacuum. They operate in an environment. Therefore, intervening variables such as attitude, entry behaviour and availability of resources come into play and indirectly affect the students' academic performance. These factors when they complement the students' involvement in decision making, there is higher teacher motivation, effective teachers and good student study habits which lead to higher mean scores and quality student grades in KCSE examinations are realized. However, the opposite would occur when there is weak entry behaviour, negative attitudes and inadequate resources leading to poor student study habits. This would ultimately contribute to poor academic performance in KCSE examinations.

2. Method

2.1 Research Design

Research design is a means of collecting data in order to answer questions concerning current status of the subject in the study (Okoth, 2012; Clark, 2009). This study employed both descriptive survey and

co relational research designs. Descriptive survey is an observational research design that focuses on determining the status of a defined population, phenomenon, situation or condition being studied (Mugenda & Mugenda, 2003). According to Orodho (2009), correlational design analyses the relationship between variables with the aim of establishing between the dependent and independent variables. In this case, this study sought to establish relationships between students' involvement in decision-making and academic performance, and making predictions once the survey identifies and accurately describes the important variables in the study. These designs were deemed appropriate because they have been found to offer to social scientists and educators a systematic and logical method of collecting data for the purpose of measuring sample characteristics and establishing facts that result in formulation of important principles of knowledge about populations that are too large to be observed directly (Mugenda & Mugenda, 2003; Koul, 1992).

2.2 Location of the Study

Kakamega County is located in the former Western Province of Kenya. It has a population of 1,660,651 and an area of 3,224.8 km². The county lies between latitudes 0° 30' North and 0° 25' North and longitudes 34° East and 35° East. It has 11 constituencies namely: Lugari, Ikolomani, Mumias East, Mumias West, Likuyani, Malava, Navakholo, Shinyalu, Butere, Lurambi and Khwisero (IIBRC, 2010). It is located at an altitude of 1520-1680 metres above sea level. The rainfall amounts of the study area range from about 1200 mm p.a to 2000mm p.a., which is bimodal (occurs in two rainy seasons that is the long and short rains) with the long rains occurring in the month of April to June while the short rains occurring in the month of October to November and short dry season in the month of December to March. The rainfall is distributed more or less uniformly throughout the year except for the month of November to February. The daytime temperature is about 30.8° C whereas at night they drop to up to 9°C with yearly mean of about 20.5°C. The County had 292 public secondary schools by the time of the conceiving this study.

2.3 Study Population

The target population refers to an entire group of individuals, events or objects having common observable characteristics from which a sample that is a smaller group is obtained. It defines the universe of the study (Ghauri & Gronhaug, 2005). This study targeted 292 public secondary schools in the accessible population of Kakamega County. Therefore, the target population of the study consisted of 292 principals, 1,984 teachers and 18,741 Form 4 students drawn from 292 public secondary schools in Kakamega County of Kenya bringing the total to 21,017 individuals. The accessible population consisted of 30 schools selected by random sampling from among the 292 public secondary schools.

2.4 Sample Size and Sampling Procedure

2.4.1 Sampling Procedure

According to Kothari (2004) and Kerlinger (1993), 10% to 30% of a population is considered a good representative of the population. In the current study therefore, 10% of 292 schools is 30 while 10% of 1984 teachers is 199. Sampling of schools involved writing names of all schools on pieces of paper and

putting them in three containers, the first one with a series of high performing schools, the second one with average performing schools and the third one with low performing schools. The pieces were rolled into balls and thoroughly mixed. Ten pieces were then randomly drawn from each of the containers. This procedure was used because it provided an efficient mechanism for capturing the heterogeneity that existed in the target population (Kothari, 2004; Mugenda & Mugenda, 2003; Blaxter, 1996). Therefore, 30 principals were sampled by purposive sampling because of the offices they held. Simple random sampling was used to give each of the teachers and students an equal chance to respond and involved the use of a table of random numbers to select 199 teachers and 393 Form 4 students to respond. The 393 Form 4 students were determined based on Israel (1992)'s formula of determining sample size as follows:

$$n = \frac{N}{1 + N(e)^2} \quad \text{Where, } n = \text{sample size, } N = \text{population size, } e = \text{the level of precision}$$

$$n = \frac{21741}{1 + (0.05)^2 21741} = \frac{21741}{55.35} = 393 \quad \text{Form 4 Students}$$

This formula was considered appropriate based on the view of Israel (1992), that the formula could be used to determine a sample size for a larger population of over 2000. Form 4 students were selected because they had more experience with the principals and teachers in their schools and could give necessary information compared to the students in the lower classes who had less experience. This sample was considered appropriate based on the view of Dooley (2001), which indicates that a study, which probes deeply into the characteristics of a small sample, will often provide more knowledge than a study, which looks at the same problem by collecting shallow information from a large sample. Stratified sampling was used to place schools into three categories depending on their status as High Performing (HP), Average Performing (AP) or Low Performing (LP) Schools.

2.4.2 Sample Size

According to Mugenda and Mugenda (2003), sample size refers to the actual number of subjects chosen as a sample to represent the population characteristics. Sample size is affected by such factors as the number of variables in the study, the type of research design, the method of data analysis and the size of the accessible population and one has to balance between systematic bias and sampling error (Ghauri & Gronhaug, 2005; Kothari, 2004; Israel, 1992). A total sample of 622 respondents was used in the study. In constructing the sample, the researcher embraced the recommendation of Kathuri and Pals (1993) that the minimum thresholds of 100 cases in major subgroups and 20 to 50 cases in minor subgroups was appropriate for surveys. Students and teachers in the schools constituted major subgroups from which 393 and 199 students and teachers were picked respectively. On the other hand, principals constituted a minor subgroup from which 30 principals were picked to respond. A sample size of respondents used is as shown in Table 1.

Table 1. Sample Size

Category of Respondents	Population (N)	Sample (n)	Percentage (%)	Sampling Technique
Principals	292	30	10.27	Purposive
Teachers	1,984	199	10.03	Simple Random
Students	21,741	393	1.81	Simple Random
Total	24,017	622	2.59	

Source: Kakamega County Director of Education (2018).

2.5 Data Collection Instruments

This study used both questionnaires and interview schedules as instruments for collecting data from respondents. Questionnaires were used to collect information from students and teachers. Questionnaires have the advantage of having everyone in each sampled category answer exactly the same questions, thereby making it possible for a few people to administer the questionnaires without affecting the validity and reliability of the instruments (Ghauri & Gronhaug, 2005). It was therefore possible to reach out on a large number of respondents quickly, easily and efficiently using questionnaires. Interview schedules were used to collect data from principals who were helpful in clarifying issues that were not clearly articulated in questionnaires. As information collecting tools, interview schedules had inbuilt flexibility, since the interviewer had leeway to adapt to situations in order to get more detailed information. According to Kathuri and Pals (1993), interview schedules also outline questions that form the basis for and a guide to the interviewing process, which helps in standardizing the interview situation.

2.5.1 Questionnaire

Hague (1998) points out that primarily the role of questionnaire is to draw accurate information from the respondent. Bell (1999) noted that questionnaires are a good way of collecting certain types of information quickly and relatively cheaply. The questionnaire is an ideal instrument to gather descriptive information from a large sample in a fairly short time (Kothari, 2004). It can also be answered at the convenience of the respondent and picked at a later time. The self-designed questionnaires had both open ended and closed questions. The questionnaire was administered to teachers and students. The respondents were assured that the information given was only for the purpose of research and thus treated with utmost confidentiality.

2.5.2 Interview Schedule

According to Kerlinger (1993), an interview is a face-to-face interpersonal role situation in which one person, the interviewer, asks the person being interviewed the responded some questions. The interview schedule was used for the principals. Creswell (2012) observes that interviews allow an in-depth insight into how individuals comprehend and relate various aspects. The interview schedule was used

to get clarification of issues, which needed probing as well as assess the accuracy and genuineness of responses given by teachers and students on students' involvement and how it is related to students' academic performance.

2.6 Pretesting of Instruments

Pretesting is the administration of data collection instruments with a small set of respondents from the population for full-scale survey. This is done to anticipate problems that may be encountered during data collection (Kothari, 2004). For instance, terminologies used in questionnaires and interview schedules may not be understood by respondents or information to be retrieved from documents may not be readily available. Reducing error to acceptable levels therefore requires pretesting of data collection instruments. According to Orodho (2009), piloting is carried out to ensure that there is clarity and efficiency of instruments before the real study is carried out. All instruments were pre-tested in three schools that were part of the target population for the study, but which had not been sampled for the actual study. By examining responses from subjects after piloting, shortcomings that may have posed threats to validity and reliability of the instruments were addressed. This improved the effectiveness of instruments in collecting relevant data.

2.6.1 Validity of Instruments

According to Zeller (1997), validity refers to the degree to which an instrument measures what it is supposed to measure for a particular purpose and a particular group. A measure is valid if it measures what it is intended to measure (Keeves, 1997). According to Bell (1999), validity tells us whether an item measures or describes what it is supposed to measure or describe. Research experts validated the instruments of data collection for this study. The instruments were presented to the research experts. The experts provided suggestions that were used to revise the instruments. In addition, pre-testing was conducted and the responses from the respondents were used to improve the items.

2.6.2 Reliability of Instruments

Quality of research is dependent on the consistency with which observations are made. Consistency is in turn dependent on the precision with which an observation is specified (Keeves, 1997). Kosecoff (1998) explained that reliability is the degree of consistency between measures obtained from a subject under similar conditions at different times. A reliable survey will provide a consistent measure of important characteristics despite background fluctuations. Test-retest method of estimating reliability was used to determine the reliability. This method administers the same instrument twice to the same group of subjects at different times.

A pilot study was done in three (3) schools that were not part of the actual study. The researcher administered the instruments to the students, teachers and the principals. After a period of two weeks, the researcher administered the instruments again to the same respondents. Responses from the respondents were thus checked for consistency. From their responses, changes were made to the structure and some of the questions. In the analysis, the sum variables were compared to a single variable (Bryman & Cramer, 2001). Cronbach's Coefficient, alpha, was computed to determine how the

items correlated among themselves. This technique was preferred because it is known to give more conservative estimates of reliability as its estimated coefficient is always lower (Mugenda & Mugenda, 2003). It was better to underestimate than to overestimate reliability to avoid making erroneous conclusions. The reliability index of 0.82 and 0.87 was obtained for students' questionnaire and teachers' questionnaire respectively. According to Koul (1992) and Sarantakos (1998), reliability index of 0.70 or higher is acceptable threshold for making inferences in a study. Therefore, the reliability indices obtained were deemed appropriate for use in this study.

2.7 Data Collection Procedure

Data is collected for the purpose of gathering information to serve or prove some fact. This requires one to follow approved procedures which guarantee adherence to ethics during research. Central to these ethics is the need to inform respondents about the nature of information sought and the use to which it will be put. This enables respondents to make informed decisions to participate in the research. The schools were categorized into High Performing Schools (HPS), Average Performing Schools (APS) and Low Performing Schools (LPS). Schools were sampled based on their strata. The research instruments were piloted in 3 schools that were not part of the actual study. Principals in the sampled schools were approached where questionnaires were administered to the sampled teachers and students. Two research assistants were trained to be conversant with the study and involved in the collection of data. Interviews and document analysis were also used to collect data concurrently with the questionnaire administration. Confidentiality was upheld at all times. This was to address ethical issues during the research.

2.8 Data Analysis Procedures

The sources of analyzed data included questionnaires, interview schedules and school records. The quantitative data obtained from close-ended parts of the questionnaire were coded in readiness for standardized statistical analysis techniques using Statistical Package for Social Sciences (SPSS) version 20.0 for analysis. Qualitative data was transcribed, grouped into themes and sub-themes as they emerged. Quantitative data was analyzed by descriptive and inferential statistics and presented in form of frequency tables, means and percentages. For better interpretations and pictorial view, data was further presented as bar graphs and pie charts. Cross tabulations, Pearson's correlation coefficient and Multiple Linear Regressions were used to establish relationships between variables. All statistical inferences were done at $p=0.05$.

3. Results

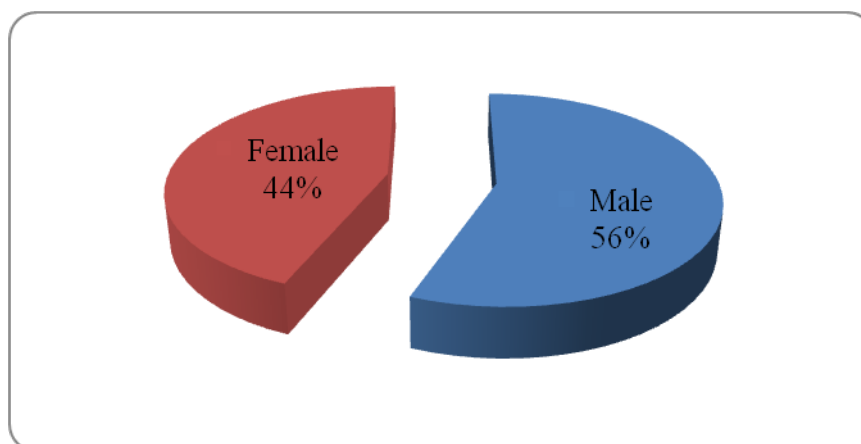


Figure 2. Students' Gender (n = 393)

Table 2. Students' Responses on Involvement in Decision-Making

Involvement issues n = 393	Frequency (F)	Percentage (%)
Principal and teachers decide what to be done in the school	365	92.9
Decisions of principals' meetings with students are implemented	336	85.5
Students elect school prefects	323	82.2
Decisions of class/ house meetings are implemented	320	81.4
Students manage their own class revision programme	304	77.4
Principals should involve students more in decision-making	297	75.6
Students are involved in proposing academic activities	280	71.2
Students participate in organizing for symposia/ contests	277	70.5
Students have a decision on whether to repeat a class or not	238	60.6
Students decide on tuition/ remedial lesson programme	146	37.2
What is put in suggestion boxes by students are implemented	121	30.8
Students are represented in staff/ BoM meetings	97	24.7
Principal's and teachers' wishes are turned down by students	78	19.8

Source: Field data (2018).

Table 3. Cross Tabulation of Students' Involvement in Decision-Making and Academic Performance

Aspect of students' involvement in decision-making	School Performance			
	High	Average	Low	Total

Proposing academic activities	Count	82	67	131	280
	Percentage	29.3	23.9	46.8	100.0
Deciding on Tuition/ remedial lesson programme	Count	15	33	98	146
	Percentage	10.3	22.6	67.1	100.0
Management of class revision programme	Count	74	99	131	304
	Percentage	24.3	32.6	43.1	100.0
Election of school prefects	Count	67	131	125	323
	Percentage	20.7	40.6	38.7	100.0
Decisions of class/ house meetings are implemented	Count	103	131	86	320
	Percentage	32.2	40.9	26.9	100.0
Decisions of principal's meetings with students are implemented	Count	117	131	88	336
	Percentage	34.8	39.0	26.0	100.0
Suggestions put in suggestion boxes by students are implemented	Count	61	33	27	121
	Percentage	50.4	27.3	22.3	100.0
Students participate in organizing for symposia/ contests	Count	81	131	65	277
	Percentage	29.2	47.3	23.5	100.0
Students have a decision to either repeat a class or not	Count	67	72	99	238
	Percentage	28.2	30.3	41.6	100.0
Students are represented in staff/BoM meeting	Count	0	65	32	97
	Percentage	0.0	67.0	33.0	100.0

Source: Field Data (2018).

Table 4. Correlation of Students' Performance and Students' Involvement in Decision-Making

Area of Student Involvement	N	Correlation Co-efficient (<i>r</i>)	Sig.
Represented in staff/BoM meetings	393	- 0.191	0.000*
Decision to either repeat a class or not	393	0.172	0.001*
Organizing of symposia/contests	393	- 0.203	0.000*
What is put in suggestion boxes is implemented	393	0.238	0.000*
Decision of meetings with principal is implemented	393	- 0.314	0.000*
Decision of house/ class meetings is implemented	393	- 0.148	0.003*
Election of prefects	393	0.435	0.000*
Management of class revision programme	393	0.063	0.213
Decision on tuition/remedial lesson programme	393	- 0.005	0.917
Proposing academic activities	393	- 0.119	0.018*

* Significant at $p=0.05$.

Source: *Derived from Field data (2018).*

Table 5. Effect of Each Aspect of Student Involvement in Decision Making and Academic Performance

Independent Variables	Unstandardized		Standardized	t	Sig.
	Coefficients		Coefficients		
	B	Std. Error	Beta		
(Constant)	6.498	.668		9.721	.000
Students involved in proposing Academic activities	-.666	.221	-.128	-3.008	.003
Students decide on tuition/remedial lesson programmes	-.731	.243	-.150	-3.004	.003
Students manage their own class revision programmes	.276	.252	.049	1.096	.274
Students elect the school prefects	2.982	.275	.485	10.831	.000
Decisions of class/house meetings are implemented	-.391	.306	-.065	-1.278	.202
Decisions of principal's meetings with students are implemented	-2.228	.315	-.333	-7.062	.000
What is put in the suggestion boxes by students is/are implemented	-.920	.206	-.180	-4.473	.000
Students participate in organizing for symposia/contests	.218	.252	.042	.867	.387
Students have a decision to either repeat a class or not	.529	.189	.110	2.792	.006
Students are represented in staff/BoM meetings	1.396	.231	.256	6.052	.000

Dependent Variable: KCSE Mean Score.

Source: *Derived from Field data (2018).*

Table 6. ANOVA Model on Students' Involvement in Decision-Making and Academic Performance

Model		Sum of Square	df	Mean Square	F	Sig
1	Regression	221.82	3	73.94	5.714	0.043
	Residual	5046.600	390	12.94		
	Total	5268.42	393			

Table 7. Regression Model on Students' Involvement in Decision Making and Academic Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.496	.246	.232	1.776

4. Discussion

4.1 Students' Gender

Findings in Figure 2 indicate that most of the student respondents were male comprising of 220 (56.0%) while the rest comprising of 173 (44.0%) were female. The findings show that most of the students were male compared to their female counterpart.

4.2 Students' Involvement in Decision-making and Academic Performance

4.2.1 Involvement of Students in Decision-Making

This study explored how students were involved in decision-making and the findings were as indicated in Table 2. Results indicate that 365 (92.9%) of the students reported that principals and teachers decided what to be done in their schools while 336 (85.5%) of them indicated that decisions of principals' meetings with students were implemented. At the same time, 323 (82.2%) of the students indicated that they elected their school prefects while 320 (81.4%) of the students reported that decisions of class/ house meetings were implemented. In addition, 304 (77.4%) of the students reported that they managed their own class revision programme while 297 (75.6%) of them indicated that principals should involve students more in decision-making. Furthermore, 280 (71.2%) of the students reported that they were involved in proposing academic activities while 277 (70.5%) of them indicated that they participated in organizing for symposia/ contests. At the same time, 238 (60.6%) of the students reported that students made a decision on whether to repeat a class or not while 146 (37.2%) of them reported that they decided on tuition/ remedial lesson programme. Also, 121 (30.8%) of the students indicated that what was put in the suggestion boxes by students were implemented while 97 (24.7%) of them reported that they were represented in staff/ BoM meetings. On the other hand, 78 (19.8%) of the students indicated that principals' and teachers' wishes were turned down by students. During interview, one principal said, "In current times, students have become very important in decision-making. I have meetings with them and whatever we agree upon is implemented." Another

principal said, “We no longer appoint prefects as it used to be but they elect themselves into various positions.” At the same time, one more principal indicated, “Students are involved in management of academic activities in this school.” From the findings, it is clear that students felt that they were involved in decision-making but some felt dissatisfied since they felt that most decisions were made by the principals and teachers. It must be noted that students can only be involved in matters that are at their scope to grasp and not every matter.

4.2.2 Cross Tabulation

This study sought to establish any relationship between students’ involvement in decision-making and academic performance. To achieve this, the study crosstabulated aspects of students’ involvement in decision-making and academic performance to establish any relationships as shown in Table 3. Data show that 82 (29.3%), 67 (23.9%) and 131 (46.8%) of the students from HPS, APS and LPS respectively were involved in proposing academic activities. This shows that there was no relationship between students proposing academic activities and academic performance. At the same time, 15 (10.3%), 33 (22.6%) and 98 (67.1%) of the students from HPS, APS and LPS respectively participated in deciding on tuition/ remedial lesson programmes. This shows that there was a negative relationship between involving students in deciding on tuition/ remedial lesson programme and academic performance. In addition, 74 (24.3%), 99 (32.6%) and 131 (43.1%) of the students from HPS, APS and LPS respectively participated in management of class revision programme. This indicates a negative relationship between students’ participation in management of class revision programme and academic performance. Furthermore, 67 (20.7%), 131 (40.6%) and 125 (38.7%) of the students in HPS, APS and LPS respectively participated in election of school prefects. This indicates a negative relationship between participation in electing school prefects and academic performance. At the same time, 103 (32.2%), 131 (40.9%) and 86 (26.9%) of the students from HPS, APS and LPS respectively reported that decisions of class/ house meetings were implemented. This shows no relationship between implementing decisions of class/house meetings and academic performance.

Furthermore, 117 (34.8%), 131 (39.0%) and 88 (26.0%) of the students from HPS, APS and LPS respectively reported that decisions of principals’ meetings with students were implemented. This clearly shows that there was no relationship between implementing these decisions and academic performance. Also, 61 (50.4%), 33 (27.3%) and 27 (22.3%) of the students from HPS, APS and LPS respectively reported that suggestions put in suggestion boxes were implemented. This shows that there was a positive relationship between implementing what is put in the students’ suggestion boxes and academic performance. At the same time, 81 (29.2%), 131 (47.3%) and 65 (23.5%) of the students from HPS, APS and LPS respectively participated in organizing for symposia/ contests. This shows that there is no relationship between students’ participation in organizing for symposia/contests and academic performance. In addition, 67 (28.2%), 72 (30.3%) and 99 (41.6%) of the students from HPS, APS and LPS respectively had a decision to either repeat a class or not. This indicates that there was a positive relationship between academic performance and students having a role to decide on whether or

not he/she should repeat a class. At the same time, none, 65 (67.0%) and 32 (33.0%) of the students from HPS, APS and LPS respectively reported that they were represented in staff/BOM meetings, which clearly shows no relationship with academic performance.

4.2.3 Pearson's Correlation Coefficient

This study further carried out correlations between involvement of students in decision-making and students' examination performance. The findings are shown in Table 4. Data indicate that there were significant correlations at $p < 0.05$ between the academic performance and areas of students' involvement in decision-making: representation in staff/BoM meetings, repetition of classes, organising of symposia/contests, implementation of suggestion box information, implementation of principal's forums decisions, implementation of house/ class meetings decisions, election of prefects and proposing academic activities. However, decision on tuition/remedial lesson programme and management of class revision programme were not significant. In addition, it is worth noting that it is only decision to either repeat a class or not, implementation of what is put in suggestion box and election of prefects that had positive correlation coefficients (r). This implies that principals who emphasized on involving students in these areas recorded improved academic performance compared to their counterparts who did not emphasize on involving students in these areas. On the other hand, attending staff/BoM meetings, organizing of symposia/contests, implementation of what students put in suggestion boxes, implementation of decisions of meetings with principal, implementation of decisions of house/ class meetings and proposing of academic activities had negative correlation coefficients (r). This implies that principals who emphasized in involving students in these particular areas, recorded lower academic performance compared to their counterparts who did not emphasize on these aspects. At the same time, it can be noted that the correlations coefficients (r) were generally low which means that the relationships were weak.

4.2.4 Regression Analysis

In order to establish the relative contribution of each independent variable on academic performance, a multi-linear regression was specified. According to Kerlinger (1993), multiple regression attempts to determine whether a group of independent variables together predict a given dependent variables. This study adopted the backward elimination method, which allows for the selection of variables for involvement in the regression model that considered all independent variables and then eliminated those variables that did not make any significant contribution to prediction of the dependent variable (Gall, Gall & Borg, 2007; Hair et al., 2009).

Under this objective, this study sought to establish the relationship between involvement of students in decision-making and academic performance. The relative effects of nine regress or (independent) variables: represented in Staff/BoM meetings, deciding on repeating classes, participating in organizing for symposia/contests, implementing what is put suggestion boxes by students is implemented, decisions of principals' meetings with students are implemented, decisions of class/house meetings are implemented, electing the school prefects, tuition/remedial lesson programme and proposing academic

activities were considered together in one equation as predictors of [Y] academic performance (dependent variable). The main objective of using multiple regression analysis for estimation was to explain the factors that had a significant effect on academic performance (Kerlinger, 1993; Gall, Gall, & Borg, 2009).

The general statement of relationship was of the form:

$$Y = f(X_1, X_2, \dots, X_n).$$

Where Y was the criterion variable while X_1, X_2, \dots, X_n represented the explanatory variables.

The following linear regression model was specified with KCSE mean scores as the dependent variable:

$$Y = a_1X_1 + a_2X_2 + a_3X_3 + a_4X_4 + a_5X_5 + a_6X_6 + a_7X_7 + a_8X_8 + a_9X_9 + c$$

Where;

Y = Academic performance (KCSE mean scores)

X_1 = Represented in staff/BoM meetings

X_2 = Deciding on repeating classes

X_3 = Participating in organizing for symposia/contests

X_4 = what is put in the suggestion boxes by students is implemented

X_5 = Decisions of principal's meetings with students are implemented

X_6 = Decisions of class/house meetings are implemented

X_7 = Electing the school prefects

X_8 = Tuition/remedial lesson programme

X_9 = Proposing academic activities

c = Constant; and a_1, \dots, a_9 are regression coefficients

This model entered nine explanatory variables for a linear relationship with academic performance. These were: principal visiting classes during lessons, principal visiting and attending lessons being taught by teachers, teachers signing class attendance list with heads of subject, teachers signing class attendance list with heads of department, teachers filling the record of work covered book, students reporting during principal's forum, principal counter-checking to ensure that all practicals/projects are done and principal checking students' notes.

Results in Table 5 show that the prediction equation for academic performance (Y) becomes:

$$Y = 6.498 - 0.128 [\text{proposing academic activities}] - 0.150 [\text{deciding on tuition/remedial lesson programme}] + 0.485 [\text{electing school prefects}] - 0.333 [\text{implementation of decisions of principals meetings}] - 0.18 [\text{implementation of suggestion box contents}] + 0.11 [\text{decision to repeat a class or not}] + 0.256 [\text{attending staff/BoM meetings}].$$

These findings reveal that examination meanscore is predicted to decrease by 0.128 when students are involved in proposing academic activities is increased by one, decrease by 0.15 when students' involvement in deciding on tuition/remedial lesson programme goes up by one, increase by 0.485 when students' involvement in electing school prefects goes up by one, decreases by 0.333 when

implementation of decisions of principals' meetings goes up by one, decreases by 0.18 implementation of what students put in suggestion boxes goes up by one, increases by 0.11 when students' involvement to decide on whether to repeat a class or not goes up by one and increases by 0.256 when students' attendance of staff/BoM meeting goes up by one.

Results in Table 6 indicate that the F-ratio (between groups mean square) was 5.714 while the p-value was 0.043. The probability of F-ratio (p-value) of 0.043 was less than the significance level (critical value) of 0.05. An examination of the ANOVA table, in this model revealed that the explanatory power of the model was high ($F = 5.714, p < 0.05$); thus, the model could not be rejected.

Findings in Table 7 show an R-square value of 0.246, meaning the independent variables (representation in staff/BoM meetings, deciding on repeating classes, participating in organizing for symposia/ contests, what is put in the suggestion boxes by students is implemented, decisions of principals' meetings with students are implemented, decisions of class/house meetings are implemented, electing the school prefects, tuition/remedial lesson programmes, proposing academic activities) explained 24.6% of the variation in academic performance.

The standardized beta (β) coefficients took both negative and positive values. However, only three variables namely: students electing prefects, deciding on whether to repeat a class or not and representation in staff/BoM meetings significantly enhanced students academic performance. The findings show that involvement of both teachers and students had significant relationships with students academic performance. These findings are in line with World Bank (2008) which indicated that when students participate in decision-making, they feel respected and own the programmes that are implemented. At the same time, the findings concur with Motsamai (2009) who observed that involving subordinates in decision-making improves the achievement of organisation goals while Nelson and Sassi (2005) who indicated that domination by principals and lack of involving teachers and students in decision-making in Sub-Saharan Africa lead to poor quality of education. The findings are also in line with Owiro (2002) who attributed poor results to students being left as recipients of major decisions from superiors and yet they are expected to implement them.

4.3 Conclusions and Recommendations

It was also established that there were significant correlations, at $p < 0.05$, between students' KCSE mean scores (2011-2015) and the following areas of students' involvement in decision-making: representation in staff/BoM meetings, repetition of classes, organising of symposia/contests, implementation of suggestion box information, implementation of principal's forums decisions, implementation of house/ class meetings decisions, election of prefects and proposing academic activities. Decision to either repeat a class or not, representation in staff/BoM meetings and election of prefects had positive correlation coefficients (r). On the other hand, organising of symposia/contests, implementation of what students put in suggestion boxes, implementation of decisions of meetings with principal, implementation of decisions of house/class meetings and proposing of academic activities had negative correlation coefficients (r). Linear regression analysis revealed that participation of

students in decision-making 24.6% of the variation in academic performance. Three variables namely: students electing prefects, deciding whether to repeat a class or not and representation in staff/BoM meetings took positive standardized beta coefficients (β) at $p < 0.05$.

Based on the findings and conclusions, this study recommends that: principals should put more emphasis on involving students in decision-making especially in areas that enhance academic performance. Students should have a say on whether to repeat a class or not (they should not be forced), attend staff/BoM meetings and elect prefects.

Acknowledgement

First and foremost, I thank the Almighty God for giving me grace, favour and strength to complete this work. This far I have reached, it has taken His hand. This work has been made possible by the support of a number of people. I will mention just a few that I am indebted to since it is not possible to mention all of them by name. I sincerely thank Prof. Stephen O. Odebero and Dr. LimukiiKaberia, both of Masinde Muliro University of Science and Technology (MMUST), for their guidance during this study. Finally, my sincere gratitude goes to my wife Electine and children (Eleazar, Elisha, Elvin and Ellian) for their moral support during the study. May the gracious God bless you all!

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