Relationship between Principals’ Use of Strategic Management Plans and Students’ Performance at KCSE in Murang’a County, Kenya

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Abstract: Globally, there has been a notable emphasis on the strategic management of schools as an avenue for improvement of students’ learning outcomes. In Kenya, a majority of the secondary school principals have been trained on strategic management practices but the academic achievement levels in some counties do not reflect the inputs of training on strategic planning and management. This study sought to determine the relationship between principals’ use of strategic management plans and students’ academic performance at KCSE in Murang’a County, Kenya. The study adopted a correlational research design and by use of stratified proportionate sampling leading to simple random sampling, a sample of 50 principals and 150 heads of departments from 250 public secondary schools in Murang’a County were obtained. Research instruments included questionnaires for principals and heads of departments of which the response rate was 100 per cent whereas one observation schedule was used by the researcher with a response rate of 98%. Nominal data, frequencies and averages, were analyzed with the use of descriptive and inferential statistics which included means and percentages. The inferential statistics used in data analysis included Pearson correlation coefficient. The study established that principals’ use of strategic plans in schools' strategic management practices in students’ learning had a statistically significant relationship with students’ academic performance at Kenya Certificate of Secondary Education. There was a statistically significant relationship between schools’ principals’ strategic management practices, however, effectiveness of various management practices differed. Ministry of education can regularly analyze the schools’ strategic plans and make training on strategic management practices mandatory for anyone aspiring to become a school principal. Equally, the study suggested further research on relationship between other different education key players strategic management practices and students’ performance in other different education level. All these would contribute towards achieving the goals and objectives of strategic management practices.

Keywords: principal, strategic management plans, students’ performance, KCSE, Kenya

1. Introduction

Yabs (2010) defines strategic management as the art of mobilizing resources and the science of formulating, implementing, and evaluating decisions that enable an organization to achieve its objectives. According to Dess, Lumpkin, Eisner, and McNamara (2014), strategic management consists of the analysis, decisions, and actions the organization takes.

There are many schools of thought on how to develop numerous frameworks to guide the strategic management process. The process typically includes five phases: assessing the organization’s current strategic direction; identifying and analyzing internal and external strengths and weaknesses; formulating action plans; executing action plans; and evaluating to what degree action plans have been successful and making changes when desired results are not being produced. According to IGI global (2020) management practices usually refers to the working methods and innovations that managers use to improve the effectiveness of work systems. Within that framework, management practices represent an important factor that has an important impact on operations of and work in organizations, and consequently underpin the competitiveness of an organization (Sutherland & Canwell, 2004; Van Assen et al., 2009; Potočan & Dabić, 2012; Dabić et al., 2013; Nedelko & Potoĉan, 2013).

2. Relationship between principals’ use of strategic management plans and students’ academic performance

Students’ academic performance is one of the key concept of this study. It is important then for this study to try and establish all that it, entails. In reference to this, Aba and Osasu (2020) concluded that students’ academic performance refers to the level of achievement in written works and exams. According to the International Establishment for Educational Programme (IIEP) site (2015) a strategic plan is an administration tool that helps an organization to enhance its performance by guaranteeing that its individuals are attempting similar objectives and by constantly conforming to the course of the association (Schram 2014) to the changing environment on the premise of results got.

It is essential for management to ensure that the structure of an organization is aligned with the organizational strategy (Icsan et Al., 2017). This may be a challenge for educational institutions whose management manual is designed and controlled from without the schools and by an established Teachers Service Commission, for instance, in Kenya. It is no wonder that most educational institutions in Kenya lack adequate teaching force which goes against an assertion by Soulard et al. (2018) that strategic plans demand more employees. On their part, Lloyd, Mensch, and Clark, (2000) point out those low performing schools
are characterized by poor plans that cannot enhance the achievement of schools’ goals and objectives.

One of the strategic management practice focused by this study is the secondary schools principals’ use of strategic management plans. According to Planning and Developing Effective Schools Guide (National Department of Education, 2002), planning as a management duty is an indispensable part of on-going school improvement. This is affirmed by the idea that planning provides a summary of the level of resources that are required for the completion of a project (Ahmadian, 2018).

In the African context, Rutowski quoted in Kumi and Seidu (2017) remarks that nearing the end of the twentieth century and the early part of the 21st Century, governments in African countries have carried out educational reforms through the enactment of legislation and formulation of policies which sought to improve students’ enrollment, participation and learning outcomes. Managers who embody this kind of management helps to determine future sustainability and the profitability of educational institutions. Kumi and Seidu assert that the intuitions for these reforms were to ensure openness, proper management, and achievement outcomes for all students.

The Government of Kenya, like many other African governments, has continually implemented policies aimed at improving access, relevance, equity, and quality of education. The most notable policy documents that have shaped the provision of quality education are Kenya Vision 2030 Development Blueprint. Notably, most of the educational reforms and policies in the education system in Kenya are accompanied by heavy financial investments that require proper planning and management in order for them to be directed towards the intended objectives. Towards this end, the Ministry of Education in Kenya has directed that all secondary schools should prepare and implement strategic plans, making strategic planning to become a key component of school management in Kenya (Gitau, Gituma, Aden & Musyoka, 2013; Sije & Ochieng, 2013).

Mbugua and Rarieya (2014) affirm that not all schools in Kenya have embraced strategic planning fully, despite this being a ministerial directive. They cite cases of some schools hiring consultants to make strategic plans for them and of others borrowing and adopting strategic plans from other schools, irrespective of variation in contextual needs. Sang, Kindiki, Sang, Rotich and Kipruto (2015) indicate that 8 (9.4%) secondary schools in Nandi County had functional strategic plans, whereas 77 (90.6%) secondary schools had no strategic plans.

3. Research Methodology

3.1 Research Design

This study employed a correlational research design. This includes percentages, frequencies, means and also inferential statistics. Pearson correlational coefficient and multiple regression were used to analyze data. The main emphasis in a correlational study is to discover or establish the existence of a relationship, association, or interdependence between two or more aspects of a situation or phenomenon (Best & Khan, 2011). According to Singh (2019), the basic limitation of correlational research is that correlation does not demonstrate causation. However, the study was alert to the possibility of spurious relationships, for correct interpretation of the findings. The study attempted to check whether participation in strategic management was correlated with students’ academic performance.

3.2 Target Population

This study targeted 250 public secondary schools in Murang’a County that had presented candidates for KCSE in the five years before the period of the study. This decision was based on the understanding that it is only those schools that had presented candidates for KCSE for at least five years which could give data that would reasonably inform the relationship between strategic management practices and students’ performance in secondary schools in Murang’a County, Kenya. It was assumed that for strategic management practices to meaningfully influence students’ performance at KCSE the practices must have been used in the schools for some time and five years was deemed as adequate.

This study, therefore, targeted 250 secondary school principals and 750 heads of departments (that is, three heads of department from each school) drawn from public secondary schools in the study locale which had presented candidates for KCSE for the five years preceding the study. The rationale behind targeting three heads of department (HODs) from each school was supported by the fact that secondary schools in Murang’a County, like other parts of the republic, could be categorized into different stream-sizes such as; single stream, double stream, and three-streamed schools. These different stream-sizes results in schools having different Curriculum-Based Establishments (CBE) which guide staffing levels, including a number of HODs to serve in each school. It was assumed that each school regardless of size had at least three HODs either appointed by the Teachers Service Commission (TSC) or the school Boards of Management (BoMs). The reason behind the inclusion of HoDs as key participants in this study was based on the fact that HoDs are principals’ technical assistants in the implementation of academic programs in their departments (Mwangi, 2012).

3.3 Sample Size and Sampling Procedures

Mugenda and Mugenda (2003) explains a formula that can be used to calculate a sample size of a population that is less than 1000 by using Fisher’s formula as illustrated below;

\[
\text{Sample Size} = \frac{Z^2 \sigma^2}{w^2}
\]

A study by Mugenda and Mugenda (2003) quickly adds that a sample size of 10% to 30% of a population that is less than
Since there were 250 public secondary schools in Murang'a County that had presented candidates for KCSE for at least five years during the period preceding this study, a sample size of 50 schools (20% of 250) was deemed plausible. Different approaches were employed to obtain a sample of 50 schools to be included in this study. First, all the schools that did KCSE during the period 2014-2018 were identified from the analyzed KCSE results of 2013. It is usually a norm in KCSE results analysis at school and higher levels to compare performance in a particular year with results attained in several previous years hence identification of schools that had done KCSE in the last five years was easy. Secondly, all the schools that had presented candidates for KCSE in 2014-2018 were stratified into two strata with reference to the list ranking all secondary schools in Murang’a County on the basis of performance at KCSE in 2018. While stratifying the schools, the researcher carefully disregarded all schools that had not presented candidates for KCSE for five years before the study. The stratification process yielded two lists of schools that formed the two strata: highly performing and low performing schools. For purposes of this study, high performing schools included all those schools which posted KCSE 2018 mean standard scores (MSS) of 6.5 and above which translated to C+ which was the minimum university entry grade. The second stratum comprised low performing schools that posted MSS of 6.4 and below which did not meet the minimum university entry grade.

Stratification of the schools was done on the basis of mean standard scores posted by each school in KCSE in 2018. Kenya Certificate of Secondary Education is a standardized examination done by students at the end of four years of secondary education in Kenya. The results attained in this examination are used to place students in institutions of higher learning including university placements (Kenya National Examinations Council, 2014). This examination is also used to measure the educational success of each secondary school in Kenya. Therefore, KCSE results are taken seriously by students, teachers, school administrators, and educational planners in Kenya hence the researcher’s choice of these results as the basis of stratification in this study.

Thirdly, simple random sampling was employed in selecting schools to be included in the sample from the two strata. In this process, the name of each school in the high performing category was written on a small piece of paper which was then folded and placed in a container. From this container, 25 folded papers were randomly drawn from the container. This way, the researcher obtained randomly selected 25 high performing secondary schools which formed the first part of the study sample. The same procedure was repeated for the low performing schools, giving another set of 25 randomly selected low performing schools which formed the second part of the study sample. The sample selection processes yielded a randomly selected representative sample of 50 secondary schools which were to participate in the study. The principal and three HODs in each of the sampled secondary schools participated in this study giving a sample size of 50 principals and 150 HODs.

### 3.4 Research Instruments

This study employed three instruments. These were the principals’ questionnaire (PQ), HODs’ questionnaires (HoDQ), and also the Observation Schedules (OS). Additionally, a fourth instrument collected data to show relationship between use of SM plans and Students academic performance. The use of four instruments ensured that there was a triangulation of data and this ensured reliability of the study findings. Principals’ questionnaires collected data relating to the school and principals’ strategic management practices with a view of seeking to establish whether there was any relationship between the two variables. Heads of Departments’ questionnaires collected data from the HoDs regarding their views on strategic management practices witnessed in their schools. Observation schedules collected data relating to availability, adequacy and maintenance of school facilities being part of the management functions of principals likely to impact on students’ academic performance.

### 3.5 Instruments’ Validity

Validity is defined as the accuracy and meaningfulness of inferences, which are based on the research results (Mugenda & Mugenda, 1999). Expert opinions were sought to help to establish the validity of the instruments (Wilkinson, 1991). In this case, the researcher sought opinions of the study supervisors and two other experts in the area of the study with the aim of enhancing the validity of the instruments to be used. The supervisors are experts in Educational Management hence their views helped in the improvement of the instruments.

### 3.6 Reliability of the Instruments

Hamed, T. (2020), cited the work of Hinton et al. (2004) which suggests four cut-off points for reliability, as excellent reliability (0.90 and above), high reliability (0.70-0.90), moderate reliability (0.50-0.70) and low reliability (0.50 and below). Angell, K. (2015) asserts that Cronbach’s alpha levels are generally considered acceptable if they exceed 0.7. A correlation coefficient of 0.7 and above made the instruments to be deemed reliable and hence acceptable for use in data collection. Consequently, the study conducted a pilot study provided the opportunity to confirm details in the observation schedule with quantitative measures from the questionnaires.
Mugenda and Mugenda (1999) define reliability as a measure of the degree to which a research instrument yields consistent results or data after repeated trials. The Split-half technique of reliability testing was employed during the pre-testing of the questionnaires. In this technique, questionnaires were divided into two equivalent halves and then a correlation coefficient for the two halves computed.

3.7 Data Collection Procedures

After approval of the research proposal and clearance from the university to proceed to the data collection stage, a research permit was sought from the National Commission for Science, Technology, and Information (NACOSTI). Thereafter, the researcher visited the office of the County Director of Education (CDE) in charge of Murang’a County for introduction and permission to conduct the study in the area. After this, the researcher visited the sampled schools for introduction and booking an appointment for data collection.

On the agreed day for data collection in each school, the researcher had a brief session with the principal that entailed explaining to him or her about the PQ that the principal was to fill in and school facilities to be observed during the data collection process. The session also entailed the selection of the HODs to participate in the study. During this process, the principal identified all departments in the school with a HOD either appointed by TSC or the school BoM. If the total number of departments in a school was three, all the HODs were included in the study.

In all schools that had more than three departments with HODs, simple random sampling was employed to select three HODs to participate in the study. In this scenario, the researcher wrote the name of the department on a small piece of paper. All the papers were then mixed up in a container provided by the school and three papers were then randomly drawn from the container. For each selected department, the HOD participated in the study. This way, the researcher obtained three HODs who participated in the study from the schools.

Before filling in the questionnaires, the researcher explained the nature of the research to the principals and the HODs. They were alerted that the information being solicited would be used for academic purposes only. It was stressed to them that they should not write their names on any part of the data collection instruments. These above steps were taken to assure respondents of the confidentiality of information given and also ensure that they gave honest responses that would inform the influence use of strategic management on students’ academic performance in their schools.

After the respondents were assured of the confidentiality of their identities and were sensitized on the nature of the research, they were then given an opportunity to fill in their respective questionnaires as the researcher observed the available school facilities. This procedure was followed in all the sampled schools. After observation of the school facilities, the researcher then picked the filled in questionnaires or made arrangements on when to collect the questionnaires in cases where respondents were not able to fill them in immediately due to other urgent engagements. In each school, the researcher did not leave the school without courteously informing the principal about the progress of data collection in that particular school, appreciating the principal, HODs and school staff for facilitating data collection and then agreeing on any further arrangements in cases where questionnaires were not ready by the time of exiting.

3.8 Data Analysis

In a study by Owenga, John & Aloka, Peter & Raburu, Pamela. (2018) to investigate the Relationship between Selected Personal Determinants and Examination Cheating among Kenyan Secondary School Students, Pearson’s Product-Moment Correlation was computed, with overall scores from the two school determinants with 0.05 level of significance. Another study by Fekadu, Alemneh. (2019) on assessing the Impact of School Rules and Regulations on Students’ Perception Toward Promoting Good Behavior instead opted to use Pearson’s correlation coefficient to test reliability of questionnaires was measured with the help of Statistical Package for Social Sciences. Data collected from the respondents were analyzed using descriptive and inferential statistics. Mugenda and Mugenda (1999) assert that the purpose of descriptive statistics is to enable the researcher to meaningfully describe the distribution of scores or measurements using statistics such as frequencies and percentages.

4. Findings and Discussion

This study targeted 50 principals and 150 HoDs from 50 secondary schools sampled from a total of 250 secondary schools in Murang’a County, Kenya. All the principals and HoDs targeted in this study returned their questionnaires. Observations on school facilities were done in 49 out of the targeted 50 secondary schools. Therefore, this study realized a response rate of 100% for principals’ and HoDs’ questionnaires. The response rate for observation schedules was 98.0%.

<table>
<thead>
<tr>
<th>Table 4.1: Distribution of Respondents by Gender</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respondent</td>
</tr>
<tr>
<td>------------------</td>
</tr>
<tr>
<td>HoD</td>
</tr>
<tr>
<td>Principal</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

Analysis of principals’ professional qualifications showed that all the principals were professionally qualified teachers with varying levels of academic credentials. These qualifications ranged from Masters’s degrees to diplomas. These results agree with the findings of a study by Mwangi (2012) which established that principals in the study sample had gained high levels of education necessary to identify and deal with the challenges facing school managers in the implementation of strategic management in schools. Vernez, Karam, and Marshall (2012) asserted that principals with higher levels of education may be better placed to make decisions and
articulate and their preferences with greater force. The majority of the sampled principals are thus capable of making informed strategic decisions that enhance the competitiveness of their schools (Dess, Lumpkin, Eisner & McNamara, 2014).

This study shows that 16.0% of the sampled principals stated that they had not attended any strategic management course, 32.0% had attended only one course and only 16.0% had attended two courses. The principals who indicated that they had attended three courses were 12.0% (table 4.2). However, 24.0% had attended more than three strategic management courses.

### Table 4.2: Principals’ Administrative Tasks and Reference to Strategic Management Plans

<table>
<thead>
<tr>
<th>Statement</th>
<th>N-1 (10.0%)</th>
<th>M-2 (78%)</th>
<th>VM-3 (12.0%)</th>
<th>Mean</th>
<th>Std</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provision of staff motivation</td>
<td>3</td>
<td>39</td>
<td>6</td>
<td>2.06</td>
<td>0.43</td>
</tr>
<tr>
<td>Provision of student motivation</td>
<td>5</td>
<td>33</td>
<td>12</td>
<td>2.21</td>
<td>0.51</td>
</tr>
<tr>
<td>Provision of enough teaching facilities</td>
<td>2</td>
<td>20</td>
<td>26</td>
<td>2.50</td>
<td>0.58</td>
</tr>
<tr>
<td>Regular staff development</td>
<td>3</td>
<td>33</td>
<td>8</td>
<td>2.02</td>
<td>0.56</td>
</tr>
<tr>
<td>Addressing students’ welfare</td>
<td>4.0%</td>
<td>25</td>
<td>21</td>
<td>2.40</td>
<td>0.57</td>
</tr>
<tr>
<td>Effective resource and financial management</td>
<td>3.0%</td>
<td>25</td>
<td>22</td>
<td>2.44</td>
<td>0.54</td>
</tr>
<tr>
<td>Provision of qualified personnel</td>
<td>3</td>
<td>36</td>
<td>11</td>
<td>2.21</td>
<td>0.46</td>
</tr>
<tr>
<td>Setting of school academic performance target</td>
<td>3</td>
<td>20</td>
<td>27</td>
<td>2.54</td>
<td>0.54</td>
</tr>
<tr>
<td>financial and facility management</td>
<td>3</td>
<td>32</td>
<td>15</td>
<td>2.29</td>
<td>0.50</td>
</tr>
</tbody>
</table>

Key: N=Nil, M-Much, VM-Very much

From Table 4.2 that 10% of the principals did not refer to the strategic plans when deciding about the staff and student motivation. Perhaps strategic plans in these schools did not address staff and student motivation and if this is the case, those strategic plans failed to address some of the key factors that may be affecting students’ performance. 80% of the principals stated that they had strategic management plans in their schools whereas 20.0% did not have those plans.

In addition to the information given on the duration the strategic management plans had been used, principals were asked to indicate the extent to which they referred to their strategic plans when undertaking various administrative tasks in their schools. The results of this analysis pointed to the extent to which principals relied on strategic plans in their school management.

### Analysis of the Relationship between Principals’ use of Strategic Management Plans (SMPs) and Students’ Performance at KCSE

The independent variable was the mean level of use of strategic plans calculated from items relating to principals’ use of strategic management plans whereas the dependent variable was the school mean standard score at KCSE in 2018. Pearson correlation coefficient analysis was done to establish the relationship between principals’ level of use of strategic management plans and students’ performance at the Kenya Certificate of Secondary Education. Table 3 shows the results of the Pearson correlation coefficient analysis of the relationship between the two variables.

### Table 4.3: Results of Analysis of Relationship between Principals’ use of SMP and Students’ Performance

<table>
<thead>
<tr>
<th>Variable</th>
<th>KCSE2018</th>
<th>KCSE2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. KCSE2018</td>
<td>Pearson's r</td>
<td>p-value</td>
</tr>
<tr>
<td></td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>2. KCSE2017</td>
<td>0.957</td>
<td>&lt;.001</td>
</tr>
<tr>
<td></td>
<td>p-value</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>3. Level of Sps use</td>
<td>0.523</td>
<td>0.545</td>
</tr>
<tr>
<td></td>
<td>p-value</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

Table 4.3 shows that the Pearson Correlation Coefficient analysis of the statistical relationship between principals’ use of strategic management plans and students’ performance yielded a strong and significant relationship. The two variables posted correlation statistics as (r = .545; p<.001) in 2017 and (r=.523; p<.001) in 2018, with a strong correlation or r=.957 between KCSE results of 2017 and that of 2018. These results show that Ho1 should be rejected at p = 0.001 level of significance implying that there is a statistically significant relationship between principals’ level of use of strategic management plans and students’ performance at KCSE. These findings implied that schools whose principals had higher levels of use of strategic plans posted better mean scores at KCSE. This observation may be explained because strategic plans direct and focus principals’ attention towards overall school goals and objectives. Thus, strategic plans assist principals to carry out actions and activities which impact on students’ learning.

The strong and statistically significant and positive relationship between principals’ use of strategic management plans and students’ performance established in this study is consistent with the findings of Eldridge (2001) quoted in Siye and Ochieng (2013). Eldridge noted that strategic plans implemented at 70% and above level resulted in improved performance. These findings also agree with the findings of Andersen and Nelsen and Barhem and Elbanna as noted by Brito and Saunan (2016). These authors noted that strategic planning has a positive effect on organizational performance. Gitau, Gituma and Aden (2013) concur with the findings and assert that strategic planning is one of the major strategies for improving secondary schools in Kenya, Robbins (2003) and Sedisa (2008) assert that effective managers are those who have acquired basic skills to cope with the demands of their management tasks. These skills include technical skills, human skills, and conceptual skills. Such skills are necessary to effectively implement strategic management in schools. These findings also agree with the findings of Andersen and Nelsen and Barhem and Elbanna as noted by Brito and Saunan (2016). These authors noted that strategic planning has a positive effect on organizational performance.
were operating without strategic plans. These authors further lamented that even schools that had strategic plans rarely implemented them and they additionally support the view that the implementation of strategic plans faces many challenges.

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