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ASSESSMENT OF ANTECEDENTS AFFECTING IMPLEMENTATION OF MAINTENANCE POLICY IN AVIATION SCHOOLS IN KENYA

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ABSTRACT

It is important to have well implemented maintenance policy in the aviation industry so as to enhance equipment lifespan, reduce maintenance costs and increase plane safety. Despite its importance, implementation and compliance to maintenance policies in the aviation industry has been below average. This study thus focused on assessment of the antecedent's affecting implementation of maintenance policy in aviation schools in Kenya looking at strategic leadership, organization culture, organizational structure and capacity building anchored on the Strategic Leadership Theory, Human Relations Theory, Resource Based Theory and Bureaucratic Theory. A descriptive research design was adopted and the target population was 117 engineers and 19 managers from the aviation schools. The findings indicated that the four variables, organizational culture, organizational structure, strategic leadership and capacity building all had a positive and significant effect in enhancing policy implementation. The study recommends the management of aviation schools to enhance practices such as having effective strategic communication in the organization regarding adherence to maintenance policies, show effective control and leadership by example when it comes to implementation of maintenance policies, show effective problem-solving skills when it comes to challenges relating to implementation of maintenance policies and commitment when it comes to implementation of maintenance policies.



The study further recommends the management of aviation schools to ensure that there is employee consensus on matters touching on implementation of maintenance policies, respecting employees' approach on matters regarding implementation of maintenance policies in a professional manner, demonstration of organizational commitment to implementation of maintenance policies by employees, demonstration of high ethical practices in matters concerning implementation of maintenance policies by employees and demonstration of a positive attitude towards following policies such as maintenance policies by employees.

Key Words: *Organizational Culture, Organizational Structure, Strategic Leadership, Capacity Building, Policy Implementation*

BACKGROUND OF THE STUDY

Implementation of organizational policies according to Boselie and Paauwe (2015), highly dependence on a number of factors such as human resource, leadership, organizational culture and structure. Basically, competent personnel in terms of the level of education, education specialization, professional experience, technical skills as well as knowledge are capable of delivering success in policy implementation (Boselie & Paauwe, 2015). Competent and professional workforce perform their duties in a more knowledgeable, motivated as well as empowered manner (Carneiro, 2010). Significant human resources as well as capacity building processes are essential in Implementation of any organizational policy and strategy (Tregue & Tobia 2019). In addition, Jones, Mackey and Whetten (2014) argued that leadership is important in implementation of organization policies since it determines the organization's culture. An organization's leadership style is determined by the top management by the recruitment process that ensures acquisition of employees who share in the top management team's values. Accordingly, in the long run, superior integration as well as coordination results from recruitment of people who integrate into a shared vision. The parts that are generally more affected are the norms as well as values with it being necessary for managers to have awareness of this fact during execution of tasks and organizational strategies (O'Reilly, Caldwell, Chatman, Lapiz, & Self, 2016).

The top management are also responsible for formulation of organizational structures including information flow and decision making. It therefore follows that for the success of organizational policies and strategies, better top management has to be in place (Hayati, Atefi & Ahearne, 2018). The strategic managers are also accorded the responsibility of ensuring availability of accurate information on the key factors that require attention. To this end, leadership style is critical in implementation of organizational plans and policies. Another important factor in implementation of organizational policies according to Bashuna (2013) is organizational culture defined by the set of shared beliefs, values as well as norms that are characteristic of an organisation that lays the foundations for organisational strategy. It therefore follows that proper alignment of any strategy or policy to the organisational culture goes a long way in enhancing the success of the strategy. Of utmost importance to any organisation is the establishment of initiatives as well as goals to develop and reinforce an organisational culture that aligns to the organisational policy. Bashuna (2013) agreed that organisational culture not only unifies members of an organisation but also helps in the setting up of common rules and norms to be followed by all employees within an organisation. Bashayreh (2018) posited that there is a high level of commitment and focus by employees on productivity as a result of corporate culture as opposed to strict rules as well as regulations that are often met with resistance by employees.



Alignment of organisational policy to its goals results from flexible, unified and strong organisational cultures that positively affect policy implementation (Bashayreh, 2018). This is achievable when organisational culture focuses on productivity and targets accomplishment of the primary mission. Consequently, a domino effect is created in the organisation that ensures that each individual or group within an organisation focuses on performance as well as the institution's strategic importance (Leithy, 2017). The Aviation Schools in Kenya are approved and accredited by the Kenya Civil Aviation Authority (KCAA) as Approved Training Organization (ATOs). The schools offer a wide range of Aviation, Technical and Management programs using state of the art training equipment which need to be well maintained (KCAA, 2019). Some of the courses offered by these schools are Air Navigation Services and Aircraft Maintenance, Aviation Business Services, Aviation Safety and Security Management and Instructional Techniques (KCAA, 2019). Currently there are 19 accredited aviation schools according to the Kenya Civil Aviation Authority (2019) report which are mandated to offer the accredited aviation courses. Despite the importance of maintenance of the equipment in the schools, there have been cases of expensive equipment or parts of equipment lying in workshops in disrepair or abandoned in various states of unserviceability. Even operational equipment is not spared from the inefficiencies of the current maintenance practice. Any attempts to undertake repairs have run into a familiar problem of lack of spares. This leads to high maintenance costs and low returns on investment. This prompted this study to focus on finding out the antecedents affecting implementation of maintenance policy in aviation schools in Kenya.

STATEMENT OF THE PROBLEM

Effective implementation of maintenance policy has a number of benefits ranging from optimization of equipment lifespan, reduction in maintenance costs as well as realization of Return on Investment (ROI) (Roskowicz, Smal & Szrama, 2018). Boasson and Wettestad (2016) argued that the aviation industry experienced safety challenges which have been narrowed down to among other factors, poor maintenance of Aircrafts and ground equipment. This is supported by International Air Transport Association (IATA) (2020) fact sheet which has indicated that the number of air accidents since the year 2016 remain high. Even though the number has decreased from 64 (2016), 46 (2017), 62 (2018), 52 (2019) and 38 (2020), the small number was attributed to less flights in the year 2019 and 2020 due to Corona Virus (COVID-19). Compared to the year 2016 (39.7 million flights), the number of flights in the year 2020 were only 22.2 million in number. Despite its importance, implementation and compliance to maintenance policies in the aviation industry has been below average leading to higher maintenance costs (Mokaya, Nyaga & Authority, 2019).

According to the Kenya Civil Aviation Authority report of 2017, there has been an increase in maintenance costs in excess of Kshs. 81Million making the maintenance costs a considerable expense to the authority. The Universal Safety Oversight Audit Program (USOA) conducted in the aviation Industry in Kenya in the year 2018 identified persisting shortcomings in implementation of Critical Elements (CE) in the industry and the level of implementation remained below 42%. This also comes in the wake of increased aircrafts accidents attributed to poor state of aircrafts due to poor maintenance. While Africa has the lowest global traffic volume at only 2%, it had the highest regional accident rate at 10% of the global share a huge percentage being linked to poor state of the aircrafts (ICAO Safety Report, 2017). The implementation of maintenance policy among the aviation schools has also been low. In Aviation schools, cases abound of expensive equipment being discarded and eventually replaced over minor defects has increased.



There are also many cases where expensive equipment or parts of equipment are lying in workshops in disrepair or abandoned in various states of unserviceability thus increasing the maintenance (Thendu, 2020). The study was also motivated by the research gaps in the previous studies which have not necessarily narrowed down to the aviation industry. Studies conducted locally for instance Osman and Muendo (2020) on critical success factors for implementation of Information Communication Technology strategy focused on Non-Governmental Organizations in Kenya, Mburu (2019) on strategy implementation challenges was conducted at Telkom Kenya and Nyong'a and Maina (2019) on the determinants of strategy implementation was conducted at Kenya Revenue Authority, southern region in Kenya. They differ from this study both in context and methodology since majority were case studies. This therefore triggered a look into what antecedents affect implementation of maintenance policy in aviation schools in Kenya.

RESEARCH OBJECTIVES

- i. To establish the influence of strategic leadership on implementation of maintenance policy in aviation schools in Kenya
- ii. To determine the influence of organization culture on implementation of maintenance policy in aviation schools in Kenya
- iii. To establish the influence of organizational structure on implementation of maintenance policy in aviation schools in Kenya
- iv. To examine the influence of capacity building on implementation of maintenance policy in aviation schools in Kenya

LITERATURE REVIEW

Theoretical Review

Strategic Leadership Theory

The theory was proposed by Boal and Hooijberg (2001) to guide decision making in an organization guided by a strategic leader. The theory argued that strategic leadership is critical in the organization in ensuring that policies as well as strategies are well directed in the right direction through the guidance of a strategic leader with the ability to lead, learn and change. The theory emphasizes on the ability of the leaders in the organization to change accordingly with the changing environment of operation. The theory argues that strategic leaders are those that have the overall responsibility of the organization and their guidance is key in following of new policies and managing changes in the organization. These leaders are supposed to make strategic choices, create and communicate the vision of the firm, develop competence through capacity building, come up with working organizational structures and sustain positive organizational cultures so that implementation of organizational policies is possible. These leaders must have the ability to establish changes in the environment of operation and direct the organizational policy in the right direction.

Human Relations Theory

Professor Elton Mayo was the proponent of the theory in the year 1950. The theory places emphasis on the culture of the people in a workplace in adherence to organizational policies processes and systems. The theory argues that the employees would implement a policy if there is honest communication and interaction with the top management which brings about a good organizational culture (Bruce & Nyland, 2011). The theory posits that how employees behave and interact in a firm depends with the organizational culture.



Furthermore, employees carry on the culture from one group to another over time. Therefore, it is critical to have a positive organizational culture to support organizational strategies and policies (Bruce & Nyland, 2011).

Resource Based Theory

Penrose (1959) came up with the idea of resources which was then expounded more by Barney (1991). The view presented previously was that resources are critical to a firm's performance. To achieve its goals and strategies as well as policies, firms need critical resources to do so and those resources cannot only be physical, but also human, capabilities and financial. To achieve its policies, a firm needs physical resources such as infrastructures and technology; human resources such as skills, experience and knowledge, capabilities such as dynamic capabilities and technological capabilities as well as financial resources (Noe, Hollenbeck, Gerhart & Wright, 2017). No strategy can be a success without availability of the right resources to implement it.

Bureaucratic Theory

The theory was proposed by Max Weber in the 19th century to explain the organizational structure and how power is centered in an organization. According to the theory, bureaucracy was the major driver of organizations and administrations in delivering their mandate. Bureaucracy allows for equal employee treatment and division of labour. Weber defined bureaucracy as an organizational structure that has rules guiding operations, processes that are standardized, procedures and requirements, equal division of responsibilities, clear hierarchies and professional interactions with employees. According to Meisenbach and Jensen (2017), such an organizational structure was important in an organization if success in achieving its objectives was required. Through task specialization, clear distinguishing of hierarchy of authority and clear specification of the rules of engagement, an organization is able to maintain control and make adjustments where necessary thus achieving consistent outputs. The theory is therefore relevant to this study in explaining the role of organizational structure in implementation of its policies.

Empirical Literature Review

Chepkirui (2012) conducted a study to find out the role of strategic leadership in strategy implementation at the Agricultural Development Corporation (ADC) in Kenya. The study was a case study which adopted the use of questionnaires. Through descriptive and correlation analysis, it was established that strategic leadership was critical in providing guidance for successful implementation of strategies in the organization. Gebhardt and Eagles (2018) examined the factors influencing implementation of strategy. The study focused on parks as well as recreation centres in Ontario, Canada. The human factors as well as planning process were found to influence strategy implementation with skills and knowledge of the employees and planning key in the success of strategy implementation. Availability of key policy leaders who have the capacity to lobby for the plan as well as staff concurring with recommendations was also found to be a key factor in the implementation of strategy.

A study by Njoki (2018) assessed the influence of leadership, control and leadership on implementation of strategy. This study focused on Caritas in Nyeri. Leaders with requisite skills and experience positively influenced implementation of strategy which pointed out how leadership positively impacts on implementation. Similarly, strategy implementation was negatively affected by poor communication to the staff. Jooste and Fourie (2019) examined the influence of leadership style on strategic plan implementation in organisations in South Africa.



According to the results of this study, strategic leadership has a significant effect on effective implementation of a strategy. A high rate of success of implementation was found to result from better leadership. On the other hand, such factors as ineffective communication was found to significantly hinder the success of strategic plans. Narua (2011) carried out some study on factors influencing implementation of organizational policies and strategies plans in Savings and Credit cooperative societies (SACCOS) in Imenti North, Kenya. The study conducted a survey of all the SACCOS in the sub county. A structured questionnaire was adopted in data collection. In this study, the researcher identified factors such as; availability of funds, capacity building, management style, organizational culture and organizational structure as critical determinants of policy implementation. Ahmadi *et al.* (2012) sought to determine the impact of organizational culture while implementing policies in Iranian banks and concluded that a meaningful relationship exists between organizational culture and policy implementation. Results of their study showed that all types of organizational cultures have significant relationships with the implementation process, but the extent of the culture's influence varies from the most effective (clan culture) to the least effective (hierarchy culture).

Munyoroku (2018) examined sixty-four food processing companies operational in Nairobi Kenya Association of Manufacturers (KAM) 2011. By using primary data obtained from the companies by the use of semi-structure questionnaires, this study assessed the effect of organisational culture on strategy implementation. The main focus of this study was on manufacturing companies. The data was analyzed by inferential statistics and the results showed a positive and significant link. In particular, the results pointed out the importance of organizational culture in expediting attainment of values, objectives, goals and targets of the organisation as set by management. On the same note, organizational culture was found to affect organisation-wide performance measures including increasing shareholder value, profitability, productivity maximization, operational costs reduction, and efficiency market segment penetration.

A study on strategy implementation challenges by Mburu (2019) was conducted at Telkom Kenya. Primary data obtained from Telkom Kenya by the use of a questionnaire was analysed by descriptive as well as inferential techniques. Structural instability was found to affect implementation negatively. Unsupportive organizational culture was also found to affect implementation of strategy negatively. Carlopio and Harvey (2018) on the other hand, showed that social as well as psychological factors affect strategy implementation. In an attempt to develop a social-psychological model for implementation, Carlopio *et al.* (2018) examined competency-founded interpretation of firm resource allocation. One of the key findings of this study is that alignment of organisational culture to strategy enhances effective implementation. Strategy implementation according to the results also requires consideration of the new behavior necessary for success.

Kagumu and Njuguna (2016) conducted a study on organizational factors influencing strategy implementation in the Anglican Church of Kenya taking the case of Kirinyaga Diocese, Kenya. The study adopted a case study and focused on resources, leadership, church culture and church structure on the implementation of strategic plans. Through quantitative analysis, it was established that all these factors have a significant influence on strategy implementation in the church. Machuki (2011) carried out a study on investigation of the challenges facing implementation of strategic policies in local Authorities in Kenya taking a case of Kisii Municipal Council. The study did a case study and used structured questionnaires to collect primary data. The mode of analysis was quantitative and the study established the challenges to policy implementation were inadequate rewarding system, organizational culture, staff training, administration challenges, leadership, resources, policies and procedures.



Osman and Muendo (2020) interrogated the critical success factors for implementation of Information Communication Technology strategy among Non-Governmental Organizations in Kenya. Through a survey, the study established that organizational structure played a significant role in implementation of the strategy. A well organized and centralized organizational structure was key to successful implementation of the policy. In their analysis of the determinants of strategy implementation at Kenya Revenue Authority, southern region in Kenya, Nyong'a and Maina (2019) focused on both organizational structure and leadership. It was revealed that centralized system was more bureaucratic and hindered effective implementation of strategies in the public sector. Mogaka (2008) carried out a study on analysis of challenges of implementation of the strategic management plan in the Nairobi City Water and Sewerage Company. The study conducted a case study using questionnaires. Through correlation and regression analysis, the study revealed that the critical factors in implementation of strategies were not limited to political influence, employee training, availability of resources and organizational change.

Rajasekar (2014) carried out a study on factors affecting effective policy implementation in a service industry. The study focused on the roles of corporate communication (internal and external), leadership, human resources, organizational structure, and control mechanisms. The results of the study showed that a meaningful relationship exists between all the factors including human resources and policy implementation. A study carried out by Yambwa (2019) found out the reasons behind failure of strategic plan implementation at the ministry of Local Government, Namibia. The study identified some of the factors that affect implementation including dearth of suitable as well as committed human resource, ineffective organizational structure, financial resource deficiency, unsupportive organisational culture that was not aligned to strategy, inappropriate technology to facilitate sharing of information, lack of team works as well as commitment and poor leadership style.

Nabwire (2018) assessed determinants of success in implementation of strategies in the banking sector. A total of 69 employees of the banks examined were randomly stratified and drawn into the sample of the study. Quantitative data was obtained that was analysed by the use of descriptive as well as inferential techniques. Resource allocation was found to be an important factor that enhances the success rate of strategy implementation. The results also pointed to the importance of having financial resources to supplement the human resources available in the organisation. On the same note, another key factor that was also identified is adoption of information systems within the organisation. Lin and Lee (2018) in their study on the role of human resource and strategy implementation found that skills as well as knowledge are essential requirements towards implementation of organisational strategies as well as policies that govern operations in the organisation. They showed that most organisations whose employees have little knowledge of the new technology find it hard to implement the outlined strategy. In this case, employees who are not conversant with the different technology are unable to use it which ultimately hinders implementation of the strategy. Highlighted by the findings was the importance of human resource in strategy implementation.



RESEARCH METHODOLOGY

This study adopted a descriptive research design. The target population was 19 accredited Aviation schools in Kenya as the unit of analysis (Kenya Civil Aviation Authority, 2019) where instructors and managers from the 19 schools totaling to 117 engineers and 19 managers in charge of the implementation of maintenance policy in the aviation schools were targeted. In total, 136 respondents were targeted through a census. This study made use of a structured questionnaire to collect data since it intended to use primary data. The quantitative data was analysed using Statistical Package for Social Sciences version 24. Descriptive statistics such as frequency and means as well as inferential analysis that is regression analysis were used in the study. A multiple regression model, suitable because many variables are involved, was used to test the influence of each antecedent on the dependent variable. The model took the form below:

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \varepsilon$$

Where: Y = Implementation of Maintenance Policy; X₁ = Strategic Leadership; X₂ = Organization Culture; X₃ = Organization Structure; X₄ = Capacity Building; ε = Error term; β₀ = the constant term while the coefficient β_i, with i = 1, 2, 3 and 4 were the beta coefficients.

RESEARCH FINDINGS AND DISCUSSIONS

The target population of the study was all the 117 engineers and 19 managers of the 19 accredited aviation schools totaling to 136. However, after 13 had been used in a pilot study, they were excluded from the main survey and thus 123 questionnaires were issued. Out of the 123 questionnaires issued, 88 were responded to which gave a response rate of 72% which was considered as satisfactory according to an argument by Silverman (2016) that a response rate above 60% is satisfactory for a descriptive study.

Descriptive Findings of Strategic Leadership

Statements on human resource were rated on a likert scale and the measures of central tendency results are presented in Table 1. The findings indicated that majority of the respondents agreed that there is effective strategic communication in the organization regarding adherence to maintenance policies (M = 4.18; SD = 0.90), the top management have shown effective control and leadership by example when it comes to implementation of maintenance policies (M = 4.43; SD = 0.66), the top management have shown effective problem-solving skills when it comes to challenges relating to implementation of maintenance policies (M = 4.38; SD = 0.89), the top management have shown commitment when it comes to implementation of maintenance policies (M = 4.57; SD = 0.71) as well as that the top management have provided proper guidance in implementation of maintenance policies (M = 3.88; SD = 1.07). On average, there was an agreement that strategic leadership practices have been implemented among the aviation schools to support in implementation of policies (M = 4.29; SD = 0.85). This is consistent with Simsek et al. (2015) who argued that effective senior management leadership directly relates to successful strategy and policy implementation in the firm.



Table 1: Descriptive Findings of Strategic Leadership

Statement	Mean	Standard Deviation
There is effective strategic communication in the organization regarding adherence to maintenance policies	4.18	0.90
The top management have shown effective control and leadership by example when it comes to implementation of maintenance policies	4.43	0.66
The top management have shown effective problem-solving skills when it comes to challenges relating to implementation of maintenance policies	4.38	0.89
The top management have shown commitment when it comes to implementation of maintenance policies	4.57	0.71
The top management have provided proper guidance in implementation of maintenance policies	3.88	1.07
Average	4.29	0.85

Key: M = Mean; SD = Standard Deviation

Descriptive Findings of Organizational Culture

Statements on organizational culture were rated on a likert scale and the measures of central tendency results are presented in Table 2. The respondents agreed that there is normally employee consensus on matters touching on implementation of maintenance policies (M = 4.22; SD = 0.78), the employees approach matters regarding implementation of maintenance policies in a professional manner (M = 4.43; SD = 0.75), the employees have shown organizational commitment to implementation of maintenance policies (M = 4.00; SD = 1.14), the employees have high ethical practices in matters concerning implementation of maintenance policies (M = 4.66; SD = 0.57) and that the employees have a positive attitude towards following policies such as maintenance policies (M = 4.66; SD = 0.57). Overall, there was an agreement that organizational culture practices have been implemented among the aviation schools in Kenya which can be conducive in policy implementation (M = 4.35; SD = 0.81). This agrees with Abdul et al. (2003) who argued that organizational culture practices such as consensus and commitment are vital in strategy and policy implementation in an organization.

Table 2: Descriptive Findings of Organizational Culture

Statement	Mean	Standard Deviation
There is normally employee consensus on matters touching on implementation of maintenance policies	4.22	0.78
The employees approach matters regarding implementation of maintenance policies in a professional manner	4.42	0.78
The employees have shown organizational commitment to implementation of maintenance policies	4.43	0.75
The employees have high ethical practices in matters concerning implementation of maintenance policies	4.00	1.14
The employees have a positive attitude towards following policies such as maintenance policies	4.66	0.57
Average	4.35	0.81

Key: M = Mean; SD = Standard Deviation



Descriptive Findings of Organizational Structure

Statements on organizational structure were rated on a likert scale and the measures of central tendency results are presented in Table 3. The respondents agreed that the bureaucratic procedures in the organization towards policy implementations are not rigid ($M = 3.76$; $SD = 1.30$), centralization of role enables effective implementation of policies in the organization ($M = 4.10$; $SD = 1.02$), structuring of procedures and processes in the organization favour implementation of policies in an easy way ($M = 4.36$; $SD = 0.71$), there is team work and collaboration when it comes to following of organizational policies ($M = 4.06$; $SD = 1.01$) and the channels of communication in the organization make it easy to implement policies ($M = 4.23$; $SD = 1.00$). Overall, there was an agreement that organizational structure practices have been implemented among the aviation schools in Kenya which can be conducive for strategy implementation ($M = 4.10$; $SD = 1.01$). This is in accordance with Fernandez and Rainey (2017) who stressed that since organisational structures specify the allocation of responsibilities for specific tasks, an effective structure enhances strategy and policy adoption in an organization.

Table 3: Descriptive Findings of Organizational Structure

Statement	Mean	Standard Deviation
The bureaucratic procedures in the organization towards policy implementations are not rigid	3.76	1.30
Centralization of role enables effective implementation of policies in the organization	4.10	1.02
Structuring of procedures and processes in the organization favor implementation of policies in an easy way	4.36	0.71
There is team work and collaboration when it comes to following of organizational policies	4.06	1.01
The channels of communication in the organization make it easy to implement policies	4.23	1.00
Average	4.10	1.01

Key: M = Mean; SD = Standard Deviation

Descriptive Findings of Capacity Building

Statements on capacity building were rated on a likert scale and the measures of central tendency results are presented in Table 4. The respondents agreed that the organization has invested in workshops to build the capacity of employees in understanding maintenance policy ($M = 4.34$; $SD = 0.80$), the organization has invested in employee on the job training programmes to build the capacity of employees in understanding maintenance policy ($M = 4.36$; $SD = 0.80$), the organization has invested in employee off the job training to build the capacity of employees in understanding maintenance policy ($M = 4.42$; $SD = 0.89$), the organization has invested in consultations to build the capacity of employees in understanding maintenance policy ($M = 4.40$; $SD = 0.74$) and that the organization has job rotation



programmes to ensure that employees have a chance to learn something about maintenance (M = 4.22; SD = 1.02). Overall, it was agreed that there is capacity building among aviation schools to aide in strategy and policy implementation (M = 4.35). In their defense, Rankin et al. (2015) also argued that organization builds the capacity of its employees equipping them with relevant knowledge, skills, abilities and creativity to be used by the organisation to correctly deal with specific challenges faced by organisations, thereby increasing chances of successfully implementing their policies.

Table 4: Descriptive Findings of Capacity Building

Statement	Mean	Standard Deviation
The organization has invested in workshops to build the capacity of employees in understanding maintenance policy	4.34	0.80
The organization has invested in employee on the job training programmes to build the capacity of employees in understanding maintenance policy	4.36	0.80
The organization has invested in employee off the job training to build the capacity of employees in understanding maintenance policy	4.42	0.89
The organization has invested in consultations to build the capacity of employees in understanding maintenance policy	4.40	0.74
The organization has job rotation programmes to ensure that employees have a chance to learn something about maintenance	4.22	1.02
Average	4.35	0.85

Key: M = Mean; SD = Standard Deviation

Descriptive Findings of Implementation of Maintenance Policy

Statements on implementation of maintenance policy were rated on a likert scale and the measures of central tendency results are presented in Table 5. There was an agreement that the organization performs risk analysis to identify areas for corrective action (M = 4.13; SD = 0.83), there is implementation of a program to monitor the conditions of the machines (M = 4.48; SD = 0.50), the frequency of machine breakdowns has decreased (M = 4.43; SD = 0.75), the frequency of maintenance has increased (M = 4.41; SD = 0.74) and that the maintenance records are well kept and up to date (M = 4.66; SD = 0.57).



Table 5: Descriptive Findings of Implementation of Maintenance Policy

Statement	Mean	Standard Deviation
The organization performs risk analysis to identify areas for corrective action	4.13	0.83
There is implementation of a program to monitor the conditions of the machines	4.48	0.50
The frequency of machine breakdowns has decreased	4.43	0.75
The frequency of maintenance has increased	4.41	0.74
The maintenance records are well kept and up to date	4.66	0.57
Average	4.42	0.68

Key: M = Mean; SD = Standard Deviation

The respondents further indicated the frequency of maintenance, number of Machine Breakdowns and Frequency of risk analysis based on secondary information for the last five years. The results were presented through trend analysis as shown in Figure 1. It was established that for the last 5 years, there has been a steady increase in frequency of conducting maintenance as well as risk analysis. In the same period, the number of breakdowns has gone down significantly.

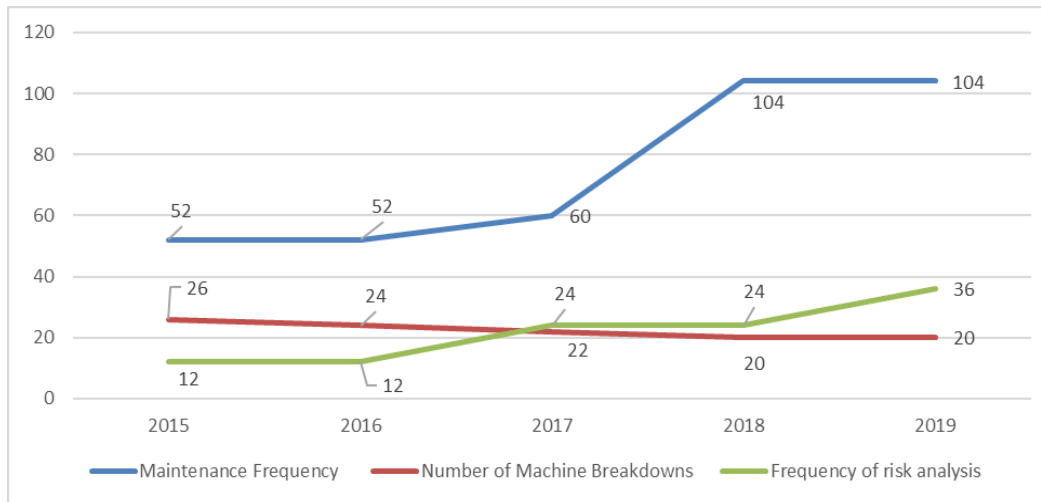


Figure 1: Trends in indicators of Implementation of Maintenance Policy



Regression Analysis

The study adopted a multiple regression analysis to determine the relationship between the variables as well as achieve the research objectives. The findings indicated the model summary, Analysis of Variance (ANOVA) and model coefficients as discussed below.

Model Summary

In the model summary, there is presentation of the R (Joint correlation) as well as R Square (Coefficient of determination). The value of R indicates the joint correlation of all the four antecedents on implementation of maintenance policy. The value of R² on the other hand indicates the percentage variation in implementation of maintenance policy attributable to the four factors. The model summary results are depicted in Table 6.

The results showed an R value of 0.760 which indicates that the joint correlation of all the four antecedents on implementation of maintenance policy was positive and strong. The results also suggested that up to 57.7% of the variation in implementation of maintenance policy among aviation schools in Kenya is attributed to the four antecedents (R² = 0.577). Other factors account for the remaining percentage.

Table 6: Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.760	0.577	0.556	0.3193
Predictors: (Constant), Capacity Building, Organizational Culture, Organizational Structure, Strategic Leadership			

Key: M = Mean; SD = Standard Deviation

ANOVA

The ANOVA results from the regression model was used to show whether the regression model was fit. As shown in Table 7, the value of F statistic was significant (Sig < 0.05). This implies that the regression model was fit and appropriate to warrant further deductions.

Table 7: ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Regression	11.539	4	2.885	28.287	.000
Residual	8.464	83	0.102		
Total	20.003	87			
Dependent Variable: Implementation of Maintenance Policy					
Predictors: (Constant), Capacity Building, Organizational Culture, Organizational Structure, Strategic Leadership					

Model Coefficients

The model coefficients were used to achieve the significance of each of the study objectives. The results in Table 8 indicates that strategic leadership has a positive and significant influence on implementation of maintenance policy ($\beta = 0.245$; $t > 1.96$; P-Value < 0.05). The results imply that improving strategic leadership leads to a significant improvement in implementation of maintenance policy among aviation schools in Kenya. This is consistent Gebhardt and Eagles (2018) who established that the availability of key policy leaders who have the capacity to lobby for the plan as well as staff concurring with recommendations is a key factor in the implementation of organizational strategies.



It was also shown that organizational culture has a positive and significant influence on implementation of maintenance policy ($\beta = 0.453$; $t > 1.96$; P-Value < 0.05). The results imply that improving organizational culture leads to a significant improvement in implementation of maintenance policy among aviation schools in Kenya. The findings are consistent with that of a study by Ahmadi *et al.* (2012) which showed that all types of organizational cultures have significant relationships with the implementation process, but the extent of the culture’s influence varies from the most effective (clan culture) to the least effective (hierarchy culture).

The study findings also showed that organizational structure has a positive and significant influence on implementation of maintenance policy ($\beta = 0.244$; $t > 1.96$; P-Value < 0.05). The results imply that improving organizational structure leads to a significant improvement in implementation of maintenance policy among aviation schools in Kenya. This is consistent with Machuki (2011) who established that the challenges to policy implementation were inadequate rewarding system, organizational culture, staff training, administration challenges, leadership, resources, policies and procedures.

It was also shown that capacity building has a positive and significant influence on implementation of maintenance policy ($\beta = 0.183$; $t > 1.96$; P-Value < 0.05). The results imply that improving capacity building leads to a significant improvement in implementation of maintenance policy among aviation schools in Kenya. Rajasekar (2014) similarly indicated that factors such as corporate communication (internal and external), leadership, human resources, organizational structure, and control mechanisms have a meaningful relationship policy implementation.

Table 8: Model Coefficients

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	0.392	0.469		0.836	0.405
Strategic Leadership	0.245	0.096	0.207	2.556	0.012
Organizational Culture	0.453	0.08	0.433	5.631	0.000
Organizational Structure	0.244	0.069	0.277	3.507	0.001
Capacity Building	0.183	0.091	0.165	2.006	0.048
Dependent Variable: Implementation of Maintenance Policy					

CONCLUSION

The study concludes that strategic leadership practices such as having effective strategic communication in the organization regarding adherence to maintenance policies, the top management showing effective control and leadership by example when it comes to implementation of maintenance policies, the top management showing effective problem-solving skills when it comes to challenges relating to implementation of maintenance policies, commitment when it comes to implementation of maintenance policies as well as providing proper guidance in implementation of maintenance policies is associated with a significant improvement in implementation of maintenance policy.



The study also concludes that organizational culture related practices such as having employee consensus on matters touching on implementation of maintenance policies, respecting employees' approach on matters regarding implementation of maintenance policies in a professional manner, demonstration of organizational commitment to implementation of maintenance policies by employees, demonstration of high ethical practices in matters concerning implementation of maintenance policies by employees and demonstration of a positive attitude towards following policies such as maintenance policies by employees is associated with a significant improvement in implementation of maintenance policy.

Another conclusion is that organizational structure related practices such as having flexible bureaucratic procedures in the organization towards policy implementations, centralization of role to enable effective implementation of policies in the organization, structuring of procedures and processes in the organization, having team work and collaboration when it comes to following of organizational policies as well as implementing flexible channels of communication in the organization is associated with a significant improvement in implementation of maintenance policy. It was also concluded that capacity building practices such as investing in workshops to build the capacity of employees in understanding maintenance policy, investing in employee on the job training programmes to build the capacity of employees in understanding maintenance policy, investing in employee off the job training to build the capacity of employees in understanding maintenance policy, investing in consultations to build the capacity of employees in understanding maintenance policy as well as having job rotation programmes to ensure that employees have a chance to learn something about maintenance is associated with a significant improvement in implementation of maintenance policy.

RECOMMENDATION

Based on the findings that strategic leadership can improve implementation of maintenance policy significantly, the study recommends the management of aviation schools to enhance adoption of such practices. For instance, it can come up with a clear communication structure, commitment as well as a clear way of solving organizational issues. Based on the findings that organizational culture can improve implementation of maintenance policy significantly, the study recommends the management of aviation schools to ensure improvement in the same. This can be done through establishing a policy that involves employees in decision making, showing organizational commitment to issues as well as emphasizing ethical values.

Given that organizational structure can improve implementation of maintenance policy significantly, the study recommends the management of aviation schools to focus on improving the same. This can be achieved by implementing bureaucratic structures that are flexible, emphasizing team work and developing clear communication channels. Since it was established that capacity building can improve implementation of maintenance policy significantly, the study recommends the management of aviation schools to focus on enhancing its impact. This can be achieved through investing employee trainings, seminars, workshops and development of clear talent development practices such as job rotation.

AUTHOR CONTRIBUTIONS

Gabriel Wainaina wrote the study concept, collected data and analyzed for the entire project under the guidance of Dr.



Paul Kariuki as the supervisor. Gabriel Wainaina also sought all the necessary permits from relevant authorities required to conduct the study.

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CONFLICT OF INTEREST

No potential conflict of interest was recorded by the authors.

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