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**SAFETY COMMUNICATION AND PERFORMANCE OF TECHNICAL AND VOCATIONAL EDUCATIONAL  
TRAINING INSTITUTIONS IN KISUMU COUNTY, KENYA**

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**SAFETY COMMUNICATION AND PERFORMANCE OF TECHNICAL AND VOCATIONAL EDUCATIONAL TRAINING INSTITUTIONS IN KISUMU COUNTY, KENYA**

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**ABSTRACT**

*The modern business climate necessitates those businesses, especially TVET institutions, recognize and harness their strategic competencies in order to compete successfully and improve their performance. These institutions must capitalize on their talents and safety communication to obtain a competitive edge. Every business has an obligation to ensure the safety of its work force and other stake holders such as customers and suppliers. Therefore, the purpose of this study was to determine the influence of safety communication on performance of TVETs in Kisumu County, Kenya. The study was grounded upon two theories namely; Systems theory and strategic leadership theory. The study adopted a survey research design. The study population included all staff at Technical and Vocational Colleges in Kisumu County. Stratified random sampling was used to arrive at a study sample of size of 355. Collection of primary data was conducted using questioners presented in Likert scale. Analysis of data collected was done using Statistical Package for Social Sciences version 21. Both descriptive and inferential statistics were used in analysis of data collected. Inferential statistics was used to determine the strength of relationship between the independent and dependent variables. The study results revealed that there is a positive and significant relationship between Safety Communication and organizational performance at ( $\beta=0.684$ ,  $\text{sig}=0.004$ ). The study therefore concluded that an increase in each of the study's independent variable would lead to an increase in organization performance.*

**Key words:** Safety Communication, Strategic Initiatives, Performance

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## INTRODUCTION

The importance of strategic initiatives cannot be underestimated because the provision of safe workplace environment has a direct influence on both the employees' inspiration and organization performance. Sundstrom *et al* (1994) argue that most people spend about seventy percent of their time in the work place and this greatly influences their mental status, actions, beliefs and performance. Consequently, better outcomes and increased productivity is assumed to be the result of better workplace environment. Oxenburgh *et al.* (2004) argues that the safety of all workers is directly associated to the company's productivity in all work places. In essence, for any company to experience and enjoy increased productivity and sustained profits, it must consider with art most important the safety and health of the employees. A study conducted by Lamm *et al* (2006) revealed that providing a healthy and safe working environment has the potential to increase labour productivity and consequently business profits.

Safety communication is a process that involves the exchange of information about safety-related issues among people within their workplace (Siu, Phillips & Leung, 2004). Safety communication allows systems, individuals, and processes to interact deliberately and supportively in achieving health, and safety environmental goals. Vecchio-Sadus, (2007), argued that peoples' interaction determines their understanding and participation in the process of safety. Vinodkumar and Bhasi, (2010) argue that safety communication refers to open and free exchange about safety issues. The communication on safety related issues is done by frequent interaction amongst employees at workplace.

According to Hoffmann and Stetzer (1998), safety communication has a significant influence on employees' accident ascriptions, safety behavior, safety commitment, and safety performance. As argued by Vecchio-Sadus (2007), operational safety communication entails clear communication and open discussion regarding safety issues with all employees from different levels within one or more

organizations. Safety communication also involves different levels within one or more organizations, reassuring safe behaviour by providing safety feedbacks to workers and lastly it also involves ensuring that the lesson-learned programme on safety is implemented (Lin, Tang, Miao, Wang, & Wang, 2008).

According to Rashid, Nordin, and Salleh, (2014) effective communication instruments are essential in engaging employees in safety activities, gaining cooperation and support among staffs, and it also helps maintaining a positive culture within an organization. As argued by Alsamadani, Hallowell, and Javernick-Will, (2013) constructive safety communication improves employees' safety knowledge and understanding which enhances safe work practices. Safety communication can either be formal or informal communication depending on safety policies and procedures, safety incident reports, and safety workplace inductions. Michael, (2006) argued that formal safety communication includes sharing of safety knowledge that mostly occur through such as formal communication from upper management on weekly meeting, formal written communication such as poster, signage and notice board, the toolbox talks mainly to brief workers on instructions and rules before doing the task and training of new workers to improve their understanding on workplace environment (Shuen & Wahab, (2016).

### Statement of the Problem

The efficiency of educational institutions is critical in the justification of resource allocation and use. However, some developing countries like Kenya face efficiency challenges regarding resource utilization and the flow of students through the school system at various levels of education and programs (Okinyi *et al*, 2021). Antonsen (2009) argues that safety communication initiative have relentlessly remained a basis for competitive advantage in many organizations because the quality of the work place strongly influences productivity and profitability. Several studies, on the effect of safety communication on

organizational performance have been carried out, however, they have presented conceptual and contextual research gaps. Lim and Hussein (2016) carried out a study to establish the impact of Safety communication on organization performance of the manufacturing sector in Malaysia. Another study was conducted by Iheanacho and Ebitu, (2016) to investigate the effects of industrial safety and health on firm performance in Nigeria.

Okello *et al* (2021) assessed the emerging trends in TVET Institutions' Policies in Relation to Students' Academic Achievement in Uasin Gishu County, Kenya. According to Nganga (2018b), the Government has reduced fees for students in VTCs as a financial intervention to woo more students into these institutions. Despite the Government's effort in teaching staff recruitment, subsidizing students' fees, and admitting individuals who are qualified and interested in vocational training, there are still problems of inability to accommodate vocational training centers' demands. Some of the issues that remain include low enrolment, graduation rates and suboptimal utilization of human resources. Oluoch *et al* (2020) studied Board effectiveness and Performance of Public TVET Institution in Nyanza Region, Kenya. Their study concluded that several factors which vary in their magnitude would influence performance of TVET Institutions in Kenya. Of the studies mentioned, it is obvious that there is minimal elaboration of the influence of safety communication initiative on performance of TVETs in Kenya. This study therefore seeks to fill these conceptual and contextual knowledge gaps by focusing on TVET institutions in Kisumu County, Kenya.

### **Study objective**

The objective of this study was to determine the influence of safety communication initiative on performance of TVETs in Kisumu County, Kenya. The study was guided by the following research hypothesis;

- **H<sub>01</sub>:** Safety communication doesn't significantly influence performance of TVETs in Kisumu County.

## **Theoretical Literature Review**

### **Systems Theory of Communication**

The systems theory originated from the works of Biologist Von Bertalanffy in the year 1937 (Building, 1956). In his works, Bertalanffy suggested the studying of entities as systems that are related to one another and affect one another (Drack, 2008). Bertalanffy argued that everything is interconnected and therefore we should study interconnectedness as a means of understanding the world.

Ever since its postulation, the system theory has adopted a multi-disciplinary approach, as it has been applied by many scholars in different disciplines. It has also provided a framework through which phenomena can be investigated from a holistic approach (Capra, 2017).

With regards to organizations, systems theory views an organization as a system composed of many subsystems whose interdependent and interlocking parts are held together by communication (Ferguson, 2007). According to systems theory, an organization and its members are viewed as a collective which is linked through networks of relationships within the system. Individuals therefore engage in patterned activities in the form of networks of relationships which in turn results in the construction and enactment of the whole organization (Katz & Kahn 1996).

These patterns of relationships are basically, communication networks. Communication networks can also be referred to the patterns of contact that are created by the flow of messages among communicators through time and space (Monge & Contractors 2003). This theory was relevant to this study as it can be linked to safety communication. Just like communication is the glue that holds components of a system through interaction, safety communication allows people,

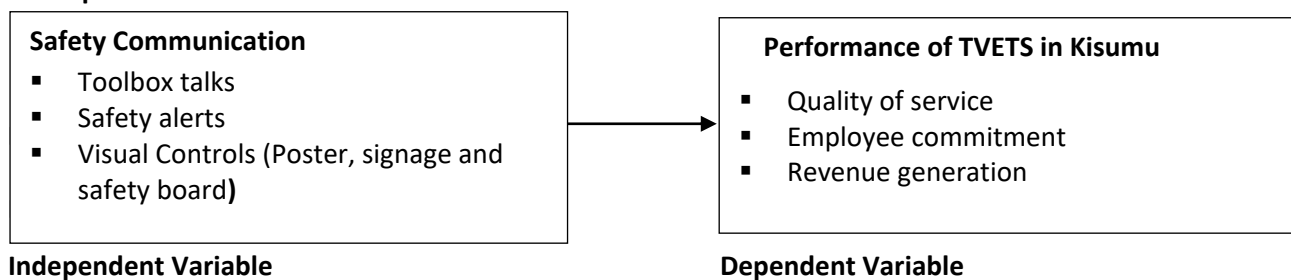
task, processes and systems to interact purposely and cooperatively to achieve safety objectives (Rafidah *et al*, 2014)

**The Strategic Leadership Theory**

The concept of the strategic leadership theory was first coined by Burns and Stalker in the year 1961, the proponent of the theory holds that the strategic management practices within the organizations are not static and therefore are subject to changes from one organization. Additionally, the idea contends that no single method of strategic management can be used to address all organizational operations (Mardar, 2013). The theory therefore holds that organization can apply several strategies as long as the overall objective of the organization is achieved (Bass, 1997).

The general assumption of the strategic theory rest on the principle that strategic initiatives do cut across the organizations and that different strategic approaches can be adopted by the organization to respond to their specific needs, therefore the theory opine that different strategies are unique to different organizations (Burnes, 2004). Further the organization management have the right to change the strategies and review them with an objective of achievement the specific management specific objectives.

**Conceptual Framework**



**Figure 1: Conceptual Framework**

**METHODOLOGY**

**Research Design:** The study used a survey research design to help in indicating trends in attitudes and behaviors and enable generalization of the findings of the research study to be done. The research design was suitable for this study in helping bring a cause-effect relationship between the variables and

Therefore, different strategies as applied by the organization or an institution relates to the organization performance and general productivity. Therefore, organizations have the option of changing the technology that is utilized within the organization in order to improve the production processes that are carried out within the organization and to promote the customer satisfaction that is accomplished by offering goods and services. However, as the theory identifies the need for the implementation of the new technological needs to improve on the organizations processes, it fails to identify the staffs that are needed to operate on the new technological changes (Castelli, 2016).

The theory has been criticized by the opponents on the ground that while the theory identifies the needed strategies to implement specific needs within the organization set up that promotes the performance of the firm, the theory does not identify the staff with the required capacity to implement the different strategic needs within the organization. Further the strategic managements are only identified within the business environment only thus limiting on other non-business-related institutions (Crossan, 2008).

help answer the research questions which have been posed in the 'what' and 'how' form.

**Target Population:** The target population refers to specific population from where the researcher obtains information of study. The study target population included all the 52 TVETS in Kisumu County. The unit of observation was center



managers, technical managers, heads of Sections and support staff. Hence, the study target population was all 626 employees cutting across all cadres of senior managers, middle level managers, supervisors and support staff (TVET Records, 2023).

**Sample Frame:** A sampling frame is a complete list of all cases in the population from which your sample size will be drawn (Mugenda, 2008). For this study the sampling frame included the full list of all employees at Technical and Vocational Colleges up to the year 2022.

**Sampling Technique:** According to Mugenda and Mugenda, (2003) sample refers to is a small group acquired from reachable population. Sampling is important in research because it enables the researcher to minimize the cost since only a portion of the population is involved. This study used Yamane (1967) formula indicated below to

determine the sample size since the sampling frame was finite and known.

$$n = (N / (1+N (e) ^2))$$

Where: n=sample size, N = Population size, e = margin of error set at 5%, for this study: N= 626, (Total number of employees at Technical and Vocational Colleges). Therefore, replacing the values in the formula gives a sample size of;

$$\begin{aligned} n &= (626 / (1+3126 (0.05) ^2)) \\ &= 354.62 \\ &= 355 \text{ respondents} \end{aligned}$$

Based on this reasoning, the sample size for this study was 355 respondents. The study used stratified random sampling to select respondents from each stratum. The sample was stratified by cadres as shown in table 1.

**Table 1: TVET Employees stratified by cadre**

	No. of employees	Percent (%)	Sample size
Centre managers	52	8.3	12
Middle level managers	105	16.7	26
Supervisors	185	29.6	93
Support staff	284	45.37	225
Total	626	100	355

Source: Author 2023

**Research Instrument:** The study administered questionnaires to the respondents to collect data. Questionnaires with both open and closed ended questions were used to collect both quantitative and qualitative data. The qualitative questions were open ended with the essence of capturing the actual facts about the subject matter. Respondents were given time to complete answering questionnaires.

The study used questionnaires for collecting data because they were easily formulated and administered. The questionnaire was also used because it's a straight forward approach of studying attitudes, values, beliefs and motives (Render, Stair, & Hanna, 2012). Likert scale was adopted for the quantitative questions for which 5= Strongly Agree, 4 = Agree, 3 =Neutral 2 = Disagree 1 = Strongly Disagree.

**Pilot Test:** The research instrument, in this case the questionnaire was subjected to pilot study. The pilot study was carried at one TVET center. The rule of the thumb suggests that 5% to 10% of the target sample should constitute the pilot test (Cooper & Schindler, 2011); therefore, the pilot study was conducted on 35 respondents representing 10% who were not included in the final study.

**Data Analysis:** The study used quantitative techniques in analyzing the data. Both descriptive and inferential statistics analysis was done, percentages, mean and standard deviations were used in descriptive analysis. The data collected was analyzed using Statistical Package for Social Sciences version 21. The study used inferential analysis to determine the strength of the relationship between the independent variables. Generally, the relationship between dependent

variable and independent variable is said to be positive when the beta coefficient value is positive while the relationship is said to be negative when the beta coefficient value is negative.

On the level of significance, relationship between dependent variable and independent variable is said to be significant when the p value is less than 0.05 and it is said to be insignificant when the p value above 0.05. A beta coefficient value of zero implies that there is no relationship between dependent variable and independent variable. The following study multiple linear regression model was tested;

$$Y = \theta_0 + \theta_1 X_1 + \epsilon$$

Where:

Y = Performance at TVETs

X<sub>1</sub> = Safety Communication

$\epsilon$  is error term,  $\theta_0$  represents the constant while  $\theta_1$ , are regression coefficients. The analyzed data was presented using figures and tables to enhance easier interpretation and understanding of the research findings

## FINDINGS AND DISCUSSION

### Response Rate

The study sought to find out the response rate. The total number of questionnaires that were administered was 355. The total number of questionnaires filled and returned was 254 questionnaires; hence 71.5% successful response rate as shown in figure 4.1. As argued by Babbie, (2004) the response rate of above 50% are acceptable to analyze and publish, 60% is good, 70% is very good while above 80% is excellent. Thus a response rate of 71.5% was good for the study.

### Descriptive Statistics of the Variable in the Study;

#### Safety Communication and Organizational Performance

This section presents the respondents views on various aspects of safety communication. The study adopted indicators presented in table 2 as measures of safety communication.

**Table 2: Safety Communication**

	Strongly Disagreed	Disagreed	Neutral	Agreed	Strongly Agreed	Mean	Std Dev
The safety signs are clear, easy to read and understand, and placed in conspicuous places	9.2%	21.1%	6.6%	25.0%	38.2%	3.62	1.41
Safety procedures are easily accessible, i.e. placed on noticeboards and internet sites	2.0%	3.9%	5.3%	45.4%	43.4%	4.20	0.75
There are frequent toolbox meetings on safe work procedure	10.3%	3.6%	10.0%	24.2%	51.8%	3.94	0.70
The post emergency procedures and emergency office contact numbers are in highly visible and accessible areas	2.1%	1.3%	4.0%	32.9%	59.7%	4.43	0.56
The company encourages workers to share safety knowledge and experiences among each other	9.3%	32.0%	6.7%	33.3%	18.7%	3.49	1.14
Our employees report incidents and injuries	6.6%	26.3%	15.8%	22.4%	28.9%	3.51	1.30
<b>Average</b>						<b>3.87</b>	<b>0.98</b>

The findings in table 2 showed that majority 38.2% of the respondents strongly agreed that safety signs are clear, easy to read and understand, and placed in conspicuous places, 25% agreed, 21.1% disagreed, 9.2% strongly disagreed while only 6.6% were neutral. The study results also revealed that 45.4% and 43.4% of respondents agrees and strongly agreed respectively that safety procedures are easily accessible, i.e. placed on noticeboards and internet sites. Those who disagreed were 5.9% while 5.3% were neutral.

On whether there was frequent toolbox meetings on safe work procedure, majority 51.8% strongly agreed, followed by 24.2% who agreed 10.3% strongly disagreed, 10.0% were neutral while 1.3% disagreed. The study results further revealed that a total of 92.6% of the study respondents agreed that post emergency procedures and emergency office contact numbers are in highly visible and accessible areas, 4.0% neither agreed nor disagreed and a total of 3.4% disagreed.

Those respondents who agreed that the company encourages workers to share safety knowledge and experiences among each other were the majority 33.3%, followed closely by 32.0% who disagreed, 9.3% strongly disagreed and 6.7% were neutral. Lastly, majority 28.9% of respondents strongly agreed that employees report incidents and injuries, 26.3% disagreed, 22.4% agreed. Those who were neutral were 15.8% and 6.6% strongly disagreed.

**Table 3: Correlations**

		Safety Communication
Safety Communication	Pearson Correlation	1
	Sig. (2-tailed)	
	N	254
Organization Performance	Pearson Correlation	0.628
	Sig. (2-tailed)	0.000

The correlation results in table 3 show that the relationship between safety communication and organizational performance is strong, positive and significant (Pearson Correlation= 0.628, sig value= 0.000<0.05). This implies that an improvement in

The mean average concerning the indicators used to measure safety communication as shown in table 2 was 3.87. This implies that majority of the respondents agreed with the statements used to measure safety communication. Therefore, we can conclude that safety communication significantly influences organizational performance. These study findings agree with Vecchio-Sadus, (2007), who argued that interaction amongst peoples defines their understanding and participation in the process of safety. Communication on safety related issues allows individuals and processes to interact deliberately and supportively in achieving health, and safety environmental goals.

### Inferential statistics

#### Correlation Analysis

The study used correlation analysis to evaluate the strength of relationship between independent variable (safety communication) and dependent variable (organizational performance). A high correlation means that two or more variables have a strong relationship with each other, while a weak correlation means that the variables are hardly related. The values of correlation coefficient varies between -1 and 1 with values close to one (in absolute terms) suggesting strong correlation between the variables. Table 3 presented the correlation results.

the indicators of safety communication positively leads to an increase in performance. The findings of this study concur with Vecchio-Sadus, (2007), who observed that interaction amongst peoples defines their understanding and participation in the process



of safety. Communication on safety issues amongst workers in a firm allows workers to interact deliberately and supportively in achieving safety environmental goals.

**Analysis of linear regressions;**

**Linear influence of Safety Communication on Organization Performance**

This tested the direct influence of Safety Communication on organization performance. The results are shown in table 4.

From table 4 the study conducted a regression analysis to establish the influence of safety communication initiative on performance. The regression analysis was useful in testing the hypotheses used in this study. The criteria was set such that the study accepts the hypothesis if the value  $\beta \neq 0$ . The significance of the beta coefficients was tested at 5% level of significance. The results for model summary, fitness and coefficients are presented.

**Table 4: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.753	0.568	0.524	0.62

Predictors: (Constant), Safety Communication  
Dependent Variable; Organization performance

The results in table 4 showed a strong positive association between safety communication initiative and organizational performance as shown by an R value of 0.753. The coefficient of

determination that is R-squared value of 0.568 indicated that 56.8% of variation in performance is explained by safety communication initiative. The remaining 43.2% is explained by other factors.

**Table 5: Analysis of Variance (Model Significance)**

	Sum of Squares	Df	Mean Square	F	Sig.
Regression	49.994	4	12.498	29.928	0.000
Residual	81.204	249	1.144		
Total	131.197	253			

Dependent Variable: Organizational Performance  
Predictors: (Constant), Safety Communication,

The results of ANOVA test in table 5 showed that the F value was 29.928 with a significance of p value = 0.000 which was less than 0.05, meaning that there is a significant relationship between safety communication initiative and performance of TVETs. The ANOVA statistics at 5% level of significance also show that the value of F computed

is 29.928 and the value of F critical at 4 degrees of freedom and 249 degree of freedom at 5% level of significance is 2.408. Thus the F computed is greater than the F critical (29.928>2.408), this showed that the overall model was statistically significant at 5% significance level.

**Table 6: Regression coefficients**

	B	Std. Error	t	Sig.
(Constant)	2.905	0.323	8.994	0.000
Safety Communication	0.684	0.228	2.995	0.004

Dependent Variable: Organizational Performance

$$Y = 2.905 + 0.684X_1$$

Y implied organization performance and  $X_1$  implies safety communication.

### Hypothesis testing for Safety Communication

**H<sub>0</sub>:** Safety communication doesn't significantly influence performance of TVETs in Kisumu County.

The results revealed that regression coefficient of safety communication was ( $\beta=0.684$ ,  $\text{sig}=0.004$ ), this implies that there is positive and significant relationship between safety communication and performance of TVETs in Kisumu County. Since the association between safety communication and organizational performance is significant, we reject the null hypothesis and accept the alternative (safety communication has significant influence performance. The results implied that a unit increase in safety communication would results to an increase of 0.684 units in performance. The study findings are consistent with Lim and Hussein, (2016) study results that revealed safety training helps to reduce the accident that happen in workplace thus a positive effect on organizations performance.

### CONCLUSIONS AND RECOMMENDATIONS

The objective of the study sought to determine the influence of safety communication on performance. The inferential results revealed that safety communication has positive and significant influence on performance of TVETs. This implies that an improvement in safety communication practices leads to leads to a positive and significant improvement in performance of TVETs. The study concluded that safety communication initiative

positively and significantly affects performance of TVETs in Kisumu. An improvement in safety communication practices such as the ensuring that safety procedures are easily accessible, post emergency procedures and emergency office contact numbers are in highly visible and accessible areas, ensuring that the safety signs are clear, easy to read and understand, and placed in conspicuous places and ensuring that employees report incidents and injuries leads to positive performance.

The study recommended that in order to ensure that there is fewer accidents and breakages reported and minimal claims for compensation and damages, there is a need to consider improving safety communication practices by encouraging workers to share safety knowledge and experiences among each other, also encourage employees to report incidents and injuries and also ensure that safety signs are clear, easy to read and understand, and placed in conspicuous places.

### Areas for further studies

The study recommended future studies to look at other safety practices that affects performance of TVETs since, safety communication involvement is for 56.8% of the variation in performance. Further studies should also be conducted to determine the influence of safety communication on performance of other sectors. Future studies should also focus on adoption of different research methodologies other than the one adopted in this study.

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