

# Effect of Organizational Structure on the Delivery of Quality Education in Public Technical and Vocational Education Institutions in Kenya

Sawega James Walala<sup>1</sup>, Esther Wangithi Waiganjo<sup>1</sup> & Agnes Njeru<sup>1</sup>

<sup>1</sup> College of Human Resource Development, Jomo Kenyatta University of Agriculture & Technology, Nairobi, Kenya

Correspondence: Sawega James Walala, Business Administration, College of Human Resource Development, Jomo Kenyatta University of Agriculture & Technology, Nairobi, Kenya. E-mail: kaleksawega@gmail.com

Received: January 11, 2015

Accepted: January 16, 2015

Online Published: January 17, 2015

doi:10.5430/ijba.v6n1p98

URL: <http://dx.doi.org/10.5430/ijba.v6n1p98>

## Abstract

The purpose of the study was to investigate the effect of organizational structure on the delivery of quality education in public technical and vocational education institutions in Kenya. The study adopted Survey research design while target population was 689 employees in the Ministry of Educations' Directorate of Technical Education, National Polytechnics and Technical Institutions. Simple random, stratified and purposive sampling techniques were used to select 11 managers in Directorate of Technical Education, 15 administrators from National Polytechnics and other technical institutions, and 220 instructors from technical institutions. Data was collected using structured questionnaires and interview schedules. Data was analyzed both quantitatively and qualitatively using the statistical package for social science (SPSS) version 17.0. Descriptive and inferential statistics and content analyses were used for specific data. The analysis was further amplified by subjecting selected results to graphical and tabular techniques. The study established that the structure of the institutions was both inclusive and bureaucratic with a few being described as flexible. The management of the institutions was responsible for the implementation of the educational reforms. However, special groups were charged with responsibility of spearheading the change process. The organizational structure was directly linked with the quality of education as was demonstrated by the regression analysis. This relationship was however, not very strong. The study recommended that technical educational institutions should be structured to suite the particular reform process for effectiveness and achievement of desired results so as to enhance the quality of technical education

**Keywords:** delivery, organizational structure, quality education

## 1. Introduction

Change has been an integral part of human development with knowledge and education at its core (Kennedy & Lee, 2008; Jamila, 2012). The quest for knowledge and the desire to explore have brought enormous change in the human situation and its physical and socio-economic environment. This is due to the increased values placed on education as a vital tool for development. According to Ojiambo (2009), educational development would lead to accelerated economic growth, more wealth and income distribution, greater quality of opportunity, availability of skilled manpower, decline in population growth, long life, better health outcomes, low crimes rate, national unity and political stability.

Since education systems the world over are responsible for knowledge generation and transfer in society, the struggle to regulate the cyclic and complex association between change and knowledge has been underway at different levels of the reforms with varying degrees of implementation success (Haris, 2009; Levin, 2009). The motives behind these regulations have always been pristine, especially in the presence of political expediency (Gunter, 2008; Hargeaves, 2005; Harris, 2011; Levin and Fullan, 2008; Levin, 2010), market ruthlessness (Cheng, 2010; Hargreaves and Shirley, 2009; Hill, 2009) and even religious predispositions in some education systems (Kennedy & Lee, 2008).

According to a study by Margherita (2006), educational reforms in fourteen European countries (viz Denmark, Finland, France, Germany, Italy, Ireland, Netherlands, Portugal, Sweden, United Kingdom) were intended to make more youth attend colleges. The study found that these policy changes resulted in one additional year in school in some countries while in other it resulted in up to three additional years of schooling. In the United States of America (U.S.A), the reforms were aimed at producing graduates who will be competitive in the global market arena (Berube, 2004).

In Africa educational reforms were done for various reasons and with mixed levels of success. In South Africa the post-apartheid educational reforms were geared towards achieving equality because the government inherited one of the most unequal societies in the world (Bhikha, 2002). The reforms focused on three interventions namely: education finance reform, curriculum reform and teacher rationalization process (Bhikha, 2002). According to Jansen and Taylor (2003), the reforms achieved only little success due to what he terms as lack of wide systematic thinking, uncoordinated nature of the initiatives and the conflicting logic of the different initiatives. In Benin educational reforms were not implemented due to lack of budgetary support after United States Agency for International Development (USAID) withdrew its support and the national government was unable to finance the reforms alone (Bhikha, 2002). In Uganda, national politics often superseded educational reform goals and the local communities frequently received mixed signals regarding their involvement in their children's education (Moulton et al., 2002).

Educational change in Kenya dates back to the early years of post independent Kenya. After independence, the government appointed a committee of eminent Kenyans chaired by Prof. Ominde in 1964 and Gachukia, (2003) to collect views from the people and reform the education sector to be more responsive to the needs of independent Kenya. They recommended a system that will foster national unity; create human resources and development (Sessional Paper no. 1 2005).

The Mackay report of 1984 recommended the establishment of a second public university and retained the eight national goals of education and training articulated by Ominde report. These are; foster nationalism, patriotism and promote national unity; promote the socio-economic, technological and industrial skills for the country's development; promote individual development and self-fulfillment; promote sound moral and religious values; promote social equality and responsibility; promote respect for and development of Kenya's rich and varied cultures; promote international consciousness and foster positive attitudes towards other nations; and to promote positive attitudes towards good health and environmental protection.

The Koech report (2000) recommended integration of total quality in education and training. The recommendations of this report were not fully implemented due lack of adequate resources. The government managed only to rationalize the curriculum in line with national needs and international markets. A major policy intervention was the introduction of free primary education in January 2003 by the government. Thereafter a national education conference was organised in November 2003 and their recommendations led to the development of Sessional Paper number 1 of 2005 which forms the current education, training and research policy. The paper introduced some reforms including free day secondary education, (Kamunge report, 2008). Following the launch of Kenya Vision 2030 in 2007 and the promulgation of the new constitution in August 2010, it has become necessary to re-align the education sector to comply with the new developments.

The role of technical educational institutions in Kenya is furnishing skills required to improve productivity, raise income levels and improve access to employment opportunities (Nyerere, 2009). However, the levels of unemployment in the country have been souring every year. This has resulted to the reforms in the sectors such as the Technical, Industrial, Vocational and Entrepreneurship Training (TIVET) Bill 2012 which among others aimed at making the sector shift from time bound curriculum-based training to flexible and competency-based training, from supply-led training to demand-driven training, expansion of the technical institutions to provide training to large numbers of young people who graduate annually from secondary and primary school systems and to harmonize the education training system for East African Countries (Owate, 2012).

### *1.1 Statement of the Problem*

Education in the technical institutions in Kenya has been faced with challenges of relevance, educated unemployed, more demand for change in education to fit the industry among others (Chang'ach, 2013). There also exists issues of infrastructural inequities and dilapidated facilities and shortage of technical teachers (Otiato, 2009). The number of students being absorbed in the technical institutions has been below the threshold despite the fact that the institutions are expected to absorb the remainder of students after the Universities have taken theirs (Harris, 2011).

The foregoing prompted the reforms in the technical educational training institutions in Kenya which were aimed at addressing these challenges. For instance, TIVET Act (2012) recommended streamlining curriculum to industrial needs, face-lifting physical facilities and expanding the institutions to accommodate more students. In line with the Act is the Vision 2030 through which Kenya expects to become a newly industrialised, middle-income country, providing high quality life for all its citizens by the year 2030. This will be through the production of produce goods and services of industrial nature that will be sold beyond her borders to generate real income for the country (Government of Kenya, 2007). It is the technical institutions which are expected to take the drivers seat by mass

production of well qualified technologists and engineers. Yet the institutions are not producing people who will take the country to this Promised Land (Kenya National Commission of Human Rights, (KNCHR, 2012).

Expansion of the Universities has necessitated the takeover of the existing technical institutions by the National Universities such as the Kenya Science Teachers College, Muranga College of Technology and Kenya and Mombasa Polytechniques. This has resulted into the dying of the vocational colleges which fed the manufacturing industries with skilled labour (Cheserek & Mugalavai, 2012). This begs the question as to the commitment of the government to the achievement of the industrialization goal and the fate of students who are not admitted to the universities (Varghese, 2013).

Failure in the implementation of the reforms in the education sector in general and technical education in particular has been attributed to lack of political goodwill, lack of consultation of the stakeholders and resistance to change among others (Obonyo, 2012). Reforms processes in the education sector are largely change management issues. Studies by Kaminski (2000), Senge (1999) and Moran and Brightman (2001) revealed that effective change management required constitution of proper organizational structure among others. Kessler (2009), Van Sant (2008) and Tropenbos (2007) found out that the product of effective change management should be better problem solving in an institution that leads to improved quality service to customers. It was against this background that this study sought to evaluate the change management capacity with regard to the organizational structure on the quality of education in the technical institutions in Kenya.

## **2. Literature Review**

### *2.1 Theoretical Framework*

The Kurt Lewin (1951) Three-Step Change model which views behavior as a dynamic balance of forces working in opposing directions was used. According to the model, driving forces facilitate change because they push employees in the desired direction. Restraining forces hinder change because they push employees in the opposite direction. Therefore, these forces must be analyzed and Lewin's three-step model can help shift the balance in the direction of the planned change.

According to Lewin, the first step in the process of changing behavior is to unfreeze the existing situation or status quo which is considered the equilibrium state. Unfreezing is necessary to overcome the strains of individual resistance and group conformity. Unfreezing can be achieved by the use of three methods. First, increase the driving forces that direct behavior away from the existing situation or status quo. Second, decrease the restraining forces that negatively affect the movement from the existing equilibrium. Third, find a combination of the two methods listed above. Some activities that can assist in the unfreezing step include; motivating participants by preparing them for change, building trust and recognition for the need to change, and actively participating in recognizing problems and brainstorming solutions within a group (Robbins, 2003).

Lewin's second step in the process of changing behavior is movement. In this step, it is necessary to move the target system to a new level of equilibrium. Three actions that can assist in the movement step include; persuading employees to agree that the status quo is not beneficial to them and encouraging them to view the problem from a fresh perspective, work together on a quest for new, relevant information, and connect the views of the group to well-respected, powerful leaders that also support the change.

The third step of Lewin's three-step change model is refreezing. This step needs to take place after the change has been implemented in order for it to be sustained or "stick" over time. It is likely that the change will be short lived and the employees will revert to their old equilibrium (behaviors) if this step is not taken. It is the actual integration of the new values into the community values and traditions. The purpose of refreezing is to stabilize the new equilibrium resulting from the change by balancing both the driving and restraining forces. One action that can be used to implement Lewin's third step is to reinforce new patterns and institutionalize them through formal and informal mechanisms including policies and procedures (Robbins, 2003).

Lewin's model of change fitted the study because as motivation is important for the unfreezing state. Organization structure is important in unfreezing of the process because according to Chandler (1962), change management is dependent on the organizational dimension such as structure. This is explained in the model where firms decide on change strategy that puts in such structure, system, reward and process to support the strategy. Fair and consistent policies are useful ingredients in minimizing turbulent resistance to change experienced in Lewis' 2<sup>nd</sup> stage of change process (Tushman, Newman & Romanelli, 1997)

## 2.2 Organizational Structure

Among the issues pointed out by Hrebiniak (2006) as overreaching factors that impede change was the organizational structure. The study noted that managers were often trained to plan and not to execute strategies. The top managers are therefore always reluctant to “soil their hands” in the messy tasks of change implementation. This is because many of the areas of change are behavioral in nature and are therefore multifaceted and messy in nature and their execution always creates the need to manage change in complex organizational contexts (Kazmi, 2008).

For the successful reforms the responsiveness of the whole organization is critical for an organization to avoid the difficulties associated with this change (Al-Mashari & Zairi, 2000). Organizational structure plays an important role in helping management to achieve its objectives and follow the firm’s strategy (Robbin & DeCenzo, 2005). Many studies have found a significant relationship between organization structures and enhanced performance (Enz, 2008; Tarigan, 2005). Burns and Stalker (1961) and Covin and Slevin (1990), for example, reported such a structure to be more appropriate than its mechanistic counterpart in an environment characterized by high rates of technological and market change. Maffei and Meredith (1995) recommended that organizations adopt a flexible structure to encourage greater staff participation, which, in turn, can improve problem identification and resolution and enhance performance and quality. Tarigan (2005) employed organizational structure as a moderating variable in analyzing the relationship between business strategies and performance. This study seeks to investigate the influence of organizational structure on the effectiveness of change in the technical institutions and its effect on the quality of education.

Ministry of Education Science and Technology (MoEST) is responsible for providing education to its citizens (Ministry of Education, 2008). Its tasks include distribution of learning resources, and implementation of education policies. Tertiary education, where technical institutions belong, falls under the Ministry. The ministry’s mandate include: Science Technology Innovation (STI) Policy; research development, research authorization; and coordinating Technical Education (TE). The Kenya Institute of Curriculum Development (KICD) is responsible for educational research and development of the curriculum. It focused on providing quality, relevant and affordable educational and training programs in response to a changing social, economic and technological environment. The initiatives are met through continual research, evaluation, assessment and the monitoring processes (Kenya Institute of Education, 2009). The study sought to find out how the organizational structure influenced the reforms process in the education sector and technical institutions in particular and how this has affected the quality of technical education.

As the field of sustainability research matures, the value of implementing staff becomes more evident. Any organization can hire outside consultants to implement a strategy to achieve change to a certain extent and it has been done many times (Zeina, 2009). What is more challenging to an organization that remains a lingering question on researchers and business leaders’ minds alike is how then to continue efficiently. It is one thing for a manager to set goals and a path for employees to follow in order to achieve the intended goals and another to work collaboratively to look at the system as a whole and learn how to improve the process from within to achieve the desired change (Senge *et al*, 2008). This study sought to determine how the organization was coordinated for effective change management.

## 3. Methodology

The study adopted a survey research design to evaluate the management capacity with respect to organizational structure on the quality of technical education in Kenya. According to Mugenda and Mugenda (2003) surveys enable researchers to obtain data about practices, situations or views at one point in time through questionnaires and interviews. It is concerned with the questions as what, how and why of a phenomenon which was the concern for the study (Kothari, 2004). Surveys produce quantitative descriptions of some aspects of the study population of which the study sought to determine the effect of organizational structure on the quality of education.

The target population was all employees in the technical training institutions in Kenya and the management of the Ministry of Educations’ Directorate of Technical Education. According to the Directorate’s human resource department, there were 31 employees in the job groups M to S which is the management cadre. The study targeted all the 47 technical institutes under the TIVET sector in the Ministry of Education, Science and Technology and the Ministry of Labour and Human Resources Development. The study targeted the management and instructors of technical institutions. According to the Directorate of Technical Institutions (2012), there were 4,124 instructors in the public technical institutions in Kenya.

The researcher sampled 14 technical institutions from the total 47 which represented 30% of the target population which is in line with Mugenda and Mugenda's (2003) recommended 30% of the population. The researcher then sampled 242 respondents using both stratified random sampling and purposive sampling which is 37% of the population of the sampled technical institutions. The first strata were the managers of the Directorate of Technical Education. The second strata had the National Polytechnics while the third strata were the other 11 technical institutions.

The research Instruments comprised of structured questionnaires and interview schedules. The questionnaires were preferred as the most suitable instruments for the data collection because they allow researchers reach many respondents (or large samples) within limited time (Mugenda and Mugenda, 2003). The purpose of the interviews was to explore experiences of the management in the change management process. The researcher self-administered the questionnaires to the respondents and conducted interviews with the assistance of trained research assistants.

Data was analysed using both descriptive and inferential statistics with the aid of computer software for data analysis (SPSS). Descriptive statistics consisted of computation of sums, means, standard deviations, frequencies and percentages. Qualitative data was analysed using content analysis. The study used regression analysis to establish how the organizational structure, affected the quality of technical education in Kenya. The model for the regression analysis was:

$$Y = \alpha_0 + \beta_1 X_1 + e$$

Where:

- Y - Quality of technical education
- $\alpha_0$  - Is the constant
- $X_1$  - Organizational structure
- $\beta_1$  - Coefficients
- e - Error term

## 4. Findings

### 4.1 Employee Demographic Data

Employees' data about demographic questions was evaluated by using frequency and percentage analyses.

The results in Figure 1 show that 40.7% of the instructors were aged between 31 and 40 years while 37.3% were aged between 41 and 50 years. The study findings further show that 36.4% of the managers were aged between 41 and 50 years and over 50 years. It emerged that 27.3% of the managers were aged between 31 and 40 years. For the policy makers, the results show that majority (66.7%) were aged between 41 and 50 years while only 20% were aged between 31 and 40 years and the rest (13.3%) were aged over 50 years. The study findings mean that while the age of the instructors was distributed in all the age categories with concentration between 30 and 49 years, there were no institutional managers aged 30 years and below but equal distribution in other categories while the same was for the policy makers with concentration between 41 and 50 years.

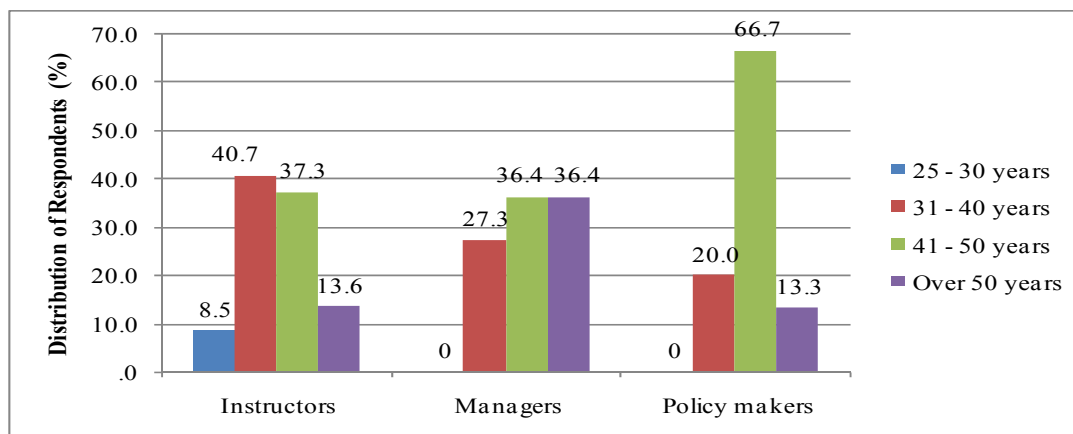


Figure 1. Distribution by age

The distribution of the respondents by designation presented in Figure 2 show that most of the respondents (42.4%) were lecturers. The results further revealed that 28.8% of the respondents were tutors implying that the instructors were the majority of the respondents.

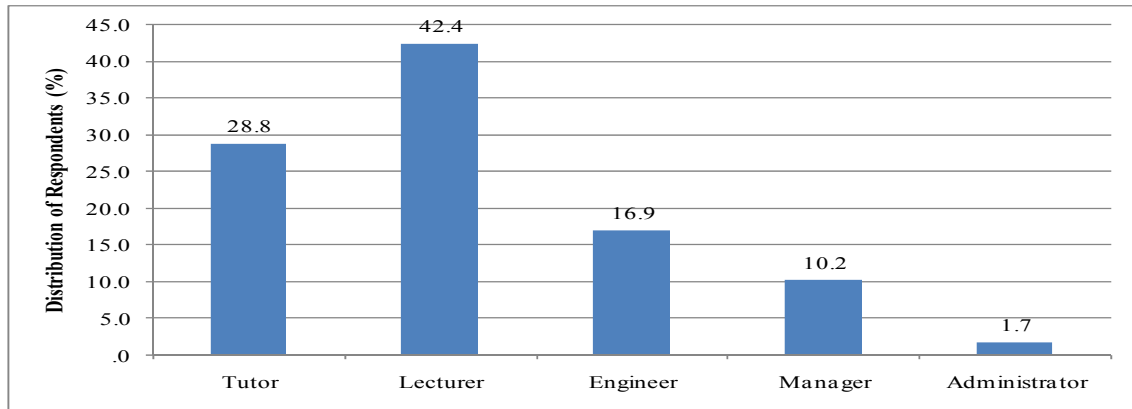


Figure 2. Distribution of respondents by designation

The findings in Figure 3 show that most of the instructors (52.5%) were graduates while 44.1% had post graduate education. On the other hand, majority of the managers (63.6%) had post graduate level of education while 36.4% were graduates. The study findings also revealed that majority of the policy makers (80%) had post graduate qualifications. It implied that most of the respondents were qualified to understand the nature of the problem of the study.

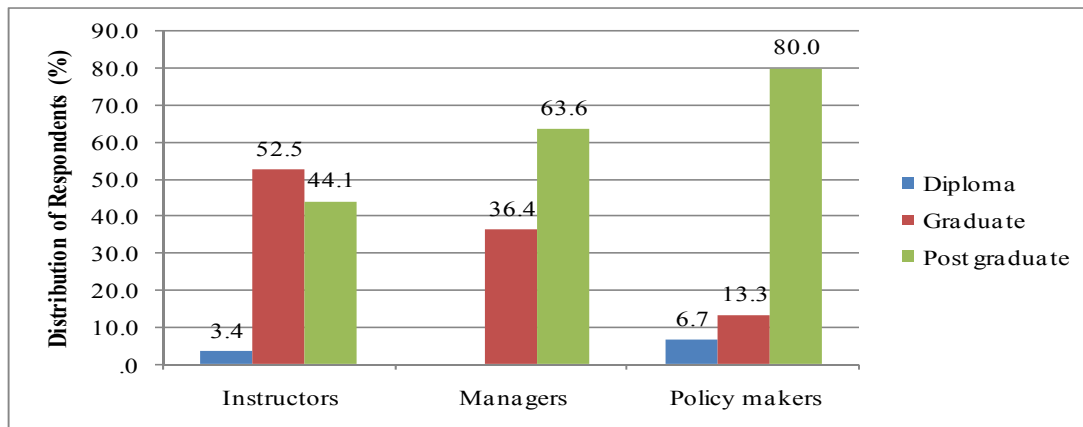


Figure 3. Education level of respondents

The results in Figure 4 revealed that most of the instructors (42.4%) had been in their organizations for less than five years while 30.5% of them had been there for between 5 and 10 years. The findings also revealed that majority of the institutional managers (63.6%) had been in their organizations for between 5 and 10 years, 27.3% for less than five years while 9.1% for between 11 and 19 years. The findings further revealed that 40% of the policy makers had been in their organizations for less than five years, 33.3% between 5 and 10 years and 20% over 15 years. These findings were in line with assertion by Braxton (2008) that respondents with a higher working experience assist in providing reliable data on the study problem since they had technical experience on the problem being investigated. The findings of the study implied that 50% of the respondents had worked in their respective organizations for long and thus understood the technical issues on change management capacity and its effect on the delivery of quality of the education in technical and vocational institutions in Kenya.

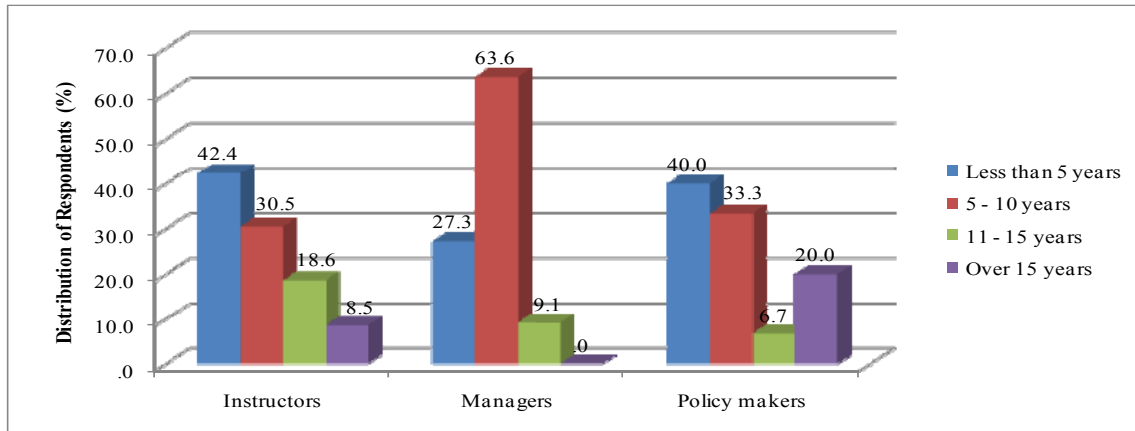


Figure 4. Working experience of the respondents

4.2 Whether Organizational Structure Influenced the Quality of Technical Educational Institutions

In this section the study sought to determine whether the organizational structure influenced the quality of technical educational institutions.

The study sought to determine the type of structures adopted by the institutions. The results in Figure 5 revealed that 38.8% of the respondents described the organizational structure as flexible while 37.2% described it as rigid. The findings further indicated that most of the institutional managers described the organizational culture as bureaucratic. The results revealed that 27.3% of the respondents described suitable organization structures as matrix and functional. These findings implied that while the instructors feel that the organizations are accommodative, the managers of the institutions perceived the structure by following a laid down procedure.

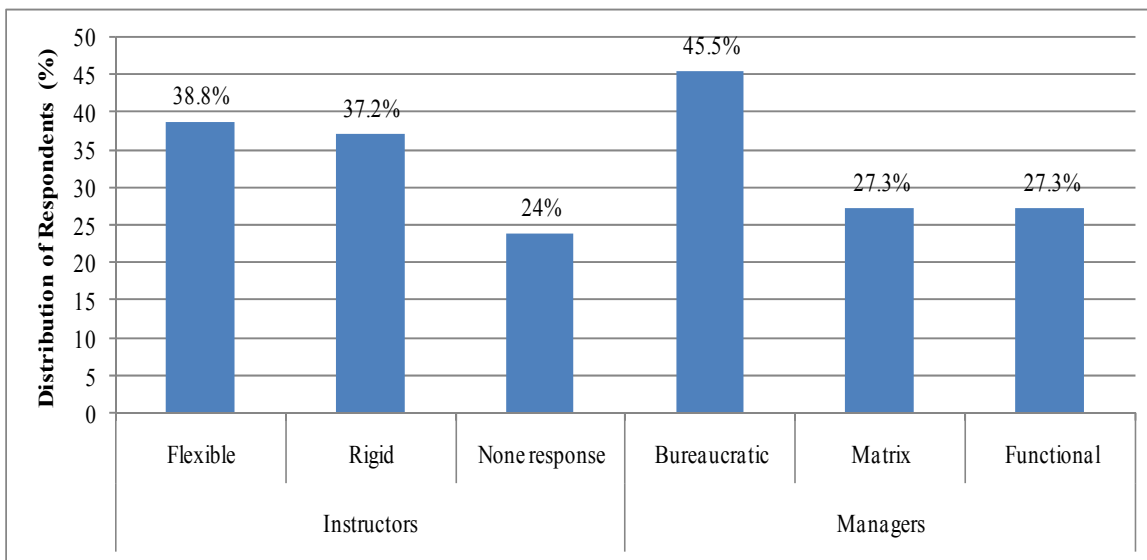


Figure 5. Type of structure adopted by the institutions

The study sought to establish from the institutional managers whether the organization charged a particular group with the change process during the reforms process. According to table 1, most respondents (54.5%), followed by 27.3% agreed to a large extent and very large extent respectively that the organization charged a particular group with the change process. This implied that a particular group was charged with the responsibility of change process during the reforms, thus confirming the findings of Moran and Bringtman (2001). Asked to justify their responses, the institutional managers explained that every time there was change in the organization the management charged a particular group headed by management to spearhead the change process.

Table 1. Organization charge a particular group with change process

<b>Response</b>	<b>Frequency</b>	<b>Percent</b>
No extent	0	0.0
Small extent	0	0.0
Moderate extent	2	18.2
Large extent	6	54.5
Very large extent	3	27.3
<b>Total</b>	<b>11</b>	<b>100</b>

As to whether the Institutions planned for the implementation of educational reforms, the findings in Table 2 revealed that most Technical Institution managers (81.8%) agreed that they indeed planned for the implementation of the educational reforms, a finding which appeared to support the study by Moran and Bringhtman (2001) on how to lead organizational change, organizational structure was very important for effective change management in the organization. The study noted that the change process required that right structure is put into place as every change requires unique approach for successful execution. On the other hand, only 18.2% did not.

Table 2. Plan for the implementation of educational reforms

<b>Response</b>	<b>Frequency</b>	<b>Percent</b>
Yes	9	81.8
No	2	18.2
<b>Total</b>	<b>11</b>	<b>100.0</b>

The institutional managers were asked to list some of the plans that were put in place for the implementation of reforms in the institutions. This was on a scale of 1-5 'strongly disagree' (1); 'disagree' (2); 'neutral' (3); 'agree' (4) and; 'strongly agree' (5). The key factors rated by the respondents were mobilization of resources, selection of team, and training of change and consultation of stakeholders. The results on Table 3 above showed that most of the Technical Institution managers (54.5%) strongly agreed that the institutions mobilized resources while 36.4% agreed that they planned for mobilization of resources. The high mean score of 4.45 shows that generally the respondents strongly agreed that mobilization of resources was part of the plans in place for the implementation of reforms. There were no variations in responses (standard deviation  $\geq 1$ ).

The findings show that 45.5% of the Technical Institution managers strongly agreed that the organization had plans for selecting teams to spearhead the reforms process. The same proportion of the managers agreed that plans were in place for the selection of the reforms team. The mean score of 4.27 showed that generally the respondents strongly agreed that the institution management plan the selection of team to spearhead the reforms process. There were no variations in responses (standard deviation  $\geq 1$ ).

The study findings further revealed that the Technical Institution managers who agreed and strongly agreed with the statement that institutions planned for the training of staff on change were equal, each at 45.5%. The mean score of 4.36 meant that respondents strongly agreed that the management planned for the training of staff. There were no variations in responses (standard deviation  $\geq 1$ ).

Furhtermore, most of the Technical Institution managers (54.5%) agreed that the institutions planed consultation with the stakeholders while 36.4% strongly agreed with the statement that the institution planned for consultation with stakeholders. The findings mean score of 4.18 meant that respondents strongly agreed that the management planned consultation with stakeholders. There were no variations in the responses (standard deviation  $\geq 1$ ).



Table 3. Type of plans for implementation of reforms in place

	<b>Strongly disagree (%)</b>	<b>Disagree (%)</b>	<b>Neutral (%)</b>	<b>Agree (%)</b>	<b>Strongly agree (%)</b>	<b>Mean</b>	<b>Std. Dev</b>
Mobilization of resources	0	0	9.1	36.4	54.5	4.45	0.688
Selecting the team to spearhead the process	0	9.1	0	45.5	45.5	4.27	0.905
Training of staff on change	0	0	9.1	45.5	45.5	4.36	0.674
Consultation with stakeholders	0	9.1	0	54.5	36.4	4.18	0.874
<b>Average</b>	<b>0</b>	<b>4.6</b>	<b>4.6</b>	<b>45.5</b>	<b>45.5</b>		

The study sought to determine the extent to which the institutional managers were inclusive in the management of the change process by involving other staff. According to figure 6 above, most of the Technical Institution managers (54.5%) indicated that to a large extent the institution management gave other staff the opportunity to participate in the change process. Further, 27.3% of them indicated that the management to a very large extent offered other staff the opportunity to participate in the change process. These findings implied that the management were to a large extent inclusive enough to allow other staff to participate in the change process which supported the views of Kotter (2007) regarding participation of everyone in the change process.

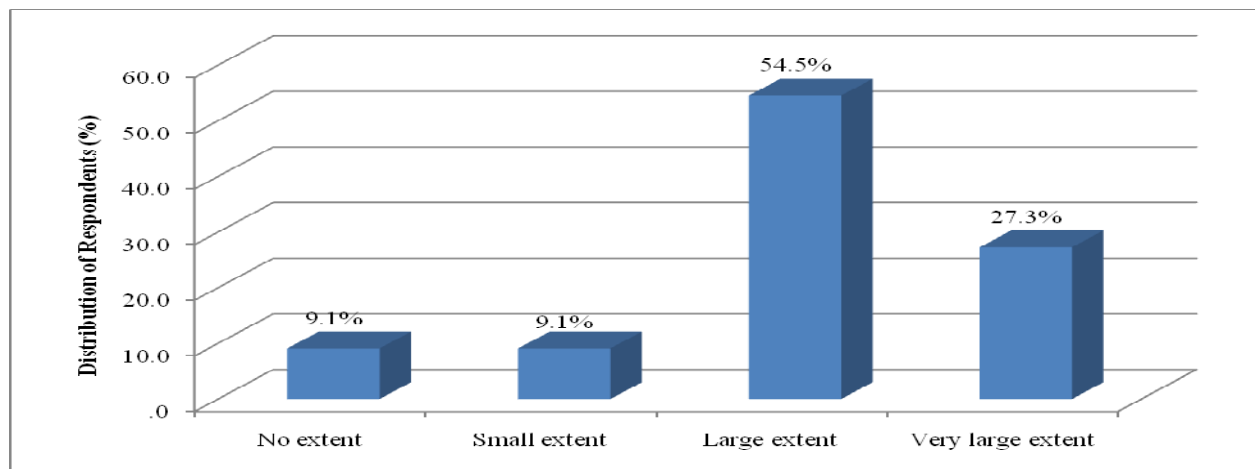


Figure 6. Whether other staff were given opportunity to participate in change process

The study sought to establish from the institution managers the person responsible for the change process in the organization. According to Figure 7, most institution managers (55%) felt that a special team assembled to oversee the change process was responsible for the change process while 36% indicated that the management was responsible for the change process in the institutions. These findings meant that the change steering team was responsible for the change process in most of the institutions. In other organizations, the managers were responsible for the change process (36%).

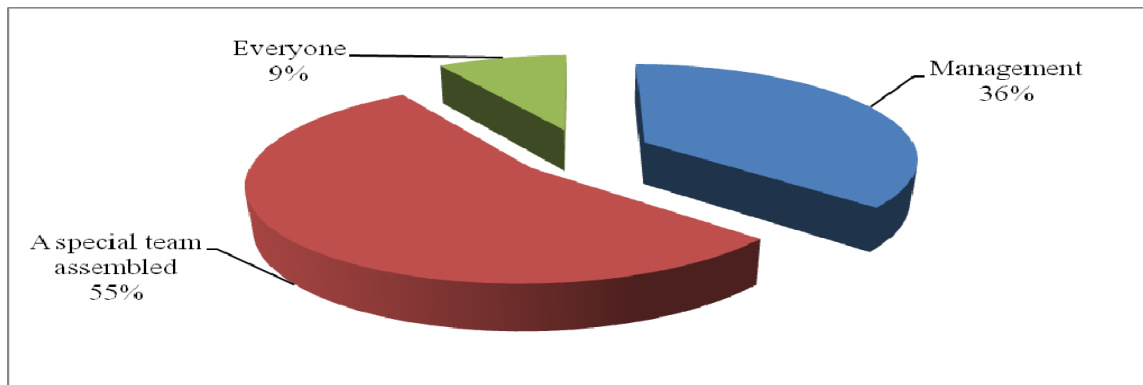


Figure 7. In-charge of change process in the organization

As to whether there was coordination in the reforms process within the institutions, the results revealed that according to most of the institution managers (54.5%) there was, to large extent, coordination in the reforms process between the management and the staff, while 18.2% responded to a very large extent on the same. The findings therefore meant that there was coordination between the management and the instructors in the reforms process as advocated by Al-Mashari and Zairi (2000) that the success of reforms required proper coordination between the management and the staff.

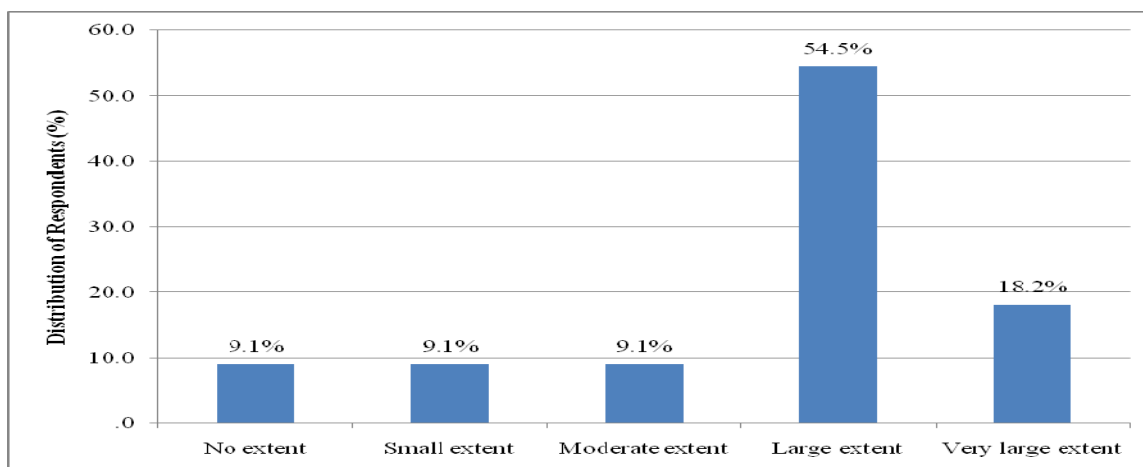


Figure 8. Whether co-ordination in reforms process between management and instructors exist

The institution managers were asked to state whether the management was flexible in incorporating the views of other staff in the implementation of reforms in the organization. According to figure 9 above, majority of the managers (82%) indicated that indeed the management was flexible in incorporating the views of other staff in the implementation of reforms in the organization, while only 18% responded in the contrary. The findings meant that the management exercised inclusiveness in the reforms process as every person's views were welcomed.

Asked to justify their 'Yes' responses, the managers explained that the management embraced diverse opinions for proper implementation of the reforms in the organization. Two out of the eleven (18.2%) institution managers stated that they usually considered the views of the instructors as paramount in the change process for the successful implementation of the reforms. However, according to two other respondents, the implementation of the reforms was the duty of the management as the other staffs were only to take instructions from the management on what to do. They went further to argue that allowing for divergent views caused confusion and lead to failure of the process. These findings supported the views by Maffei and Meredith (1995) that for greater outcome of the reforms process, organizations should adopt a flexible structure to encourage greater staff participation in the reforms process. Figure 5 below illustrates the findings.

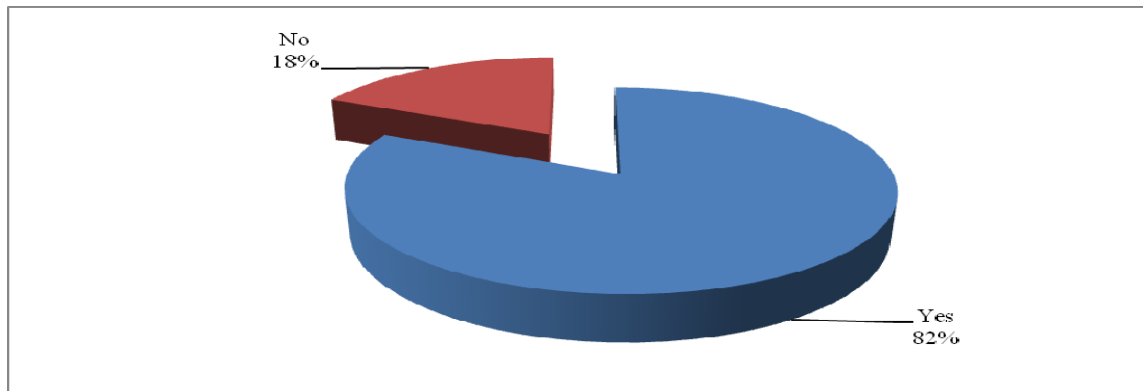


Figure 9. Management flexible in accepting the views of other staff

The study sought to determine the extent to which the organizational structure had influenced the management of the reforms process in the technical education institutions. The instructors were asked to state the extent to which they agreed with the statements regarding the influence of organizational structure and the management of the reforms process. This was on the scale of strongly disagree (1), disagree (2), neutral (3), agree (4) and strongly agree (5). The factors tested were responsibility of management, team to oversee reforms, involvement of management, treatment of employees, and the quality of training. The results in Table 4 showed that majority of the instructors (63.7%) strongly agreed that the management were responsible for the management of the changes in the institutions while 23.4% agreed. Those neutral constituted only 10% while none disagreed. The findings mean according to majority of the respondents, the management was responsible for the change process in the institutions. The findings also showed a high mean score implying that on average the respondents strongly agreed that the management was responsible for the change in the institutions. There were no variances in the responses (standard deviations  $\leq 1$ ).

The findings show that 39.3% of the instructors agreed that always there was a team in place to oversee the new reforms while 28.9% strongly agreed. The findings meant that the institutions assembled teams to oversee the reform processes whenever there were proposed reforms to be effected. These findings confirmed earlier findings by the management that the organizations had special group charged with implementation of reforms. There were no variances in the responses (standard deviation  $\leq 1$ ).

The results showed that 31.8% of the respondents agreed that the organization management was accommodative while 12.9% strongly agreed. The findings also show that the mean score of 3.51 meant that the respondents generally agreed that the organization management was accommodative. These findings confirmed those of the management who indicated that they gave the other staff opportunity to participate in the reforms process. There were no variances in the responses (standard deviation  $\leq 1$ ).

As to whether all the employees were treated equally in the implementation of reforms, 29.9% disagreed with the statements that all the employees were treated equally in the implementation of reforms. On the other hand, those who agreed and strongly agreed with the statement were equal, each at 15.9%. Even though the mean score was 3.15, the score was not as high. This implied that slightly more than half of the respondents agreed that all the employees were treated equally when it came to the implementation of the reforms. There were variances in the responses (standard deviation  $\geq 1$ ).

On whether the quality of the training was attributed to flexibility in the organizational structure, 38.8% and 19.9% of the respondents strongly agreed and agreed respectively that the quality training was attributed to flexible organization structure. Hence, with a mean score of 3.90, the respondents generally agreed that the quality of training was attributed to the flexible organization structure.

Table 4. Effect of organizational structure on management of reform process

	<b>Strongly disagree (%)</b>	<b>Disagree (%)</b>	<b>Neutral (%)</b>	<b>Agree (%)</b>	<b>Strongly agree (%)</b>	<b>Mean</b>	<b>Std. Dev</b>
Management is responsible for the management of the changes in the institution.	0	3.0	10.0	23.4	63.7	4.48	.794
Always a team in place to oversee the new reforms.	1.5	9.0	21.4	39.3	28.9	3.85	.989
Organization management is accommodative.	1.0	4.5	49.8	31.8	12.9	3.51	.813
All employees treated equally in implementation of reforms.	1.0	29.9	37.8	15.4	15.9	3.15	1.054
Quality of training attributed to flexible organization structure.	2.0	3.5	35.8	19.9	38.8	3.90	1.030
<b>Average</b>	<b>1.1</b>	<b>10.0</b>	<b>30.9</b>	<b>26.0</b>	<b>32.0</b>		

The institutional managers were asked to state the extent to which the organizational structure had influenced the success of the reforms process which led to enhanced quality of education. The findings in Figure 10 revealed that majority of the institutional managers (63.6%) indicated that the organization structure influenced the reforms in the institutions to a large extent while 18.2% of the respondents indicated that the structure influenced the reforms process to a very large extent. The findings mean that the organization structure influenced the reforms process in the organizations to a very large extent.

The institutional managers were asked to state how the organizational structure had influenced the quality of education in the institutions. The respondents explained that the structure should be in such a way that it will enhance the implementation of change. They stated that change process or reforms process at all time require restructuring. The restructuring process aligned the organization for the adoption of the reforms.

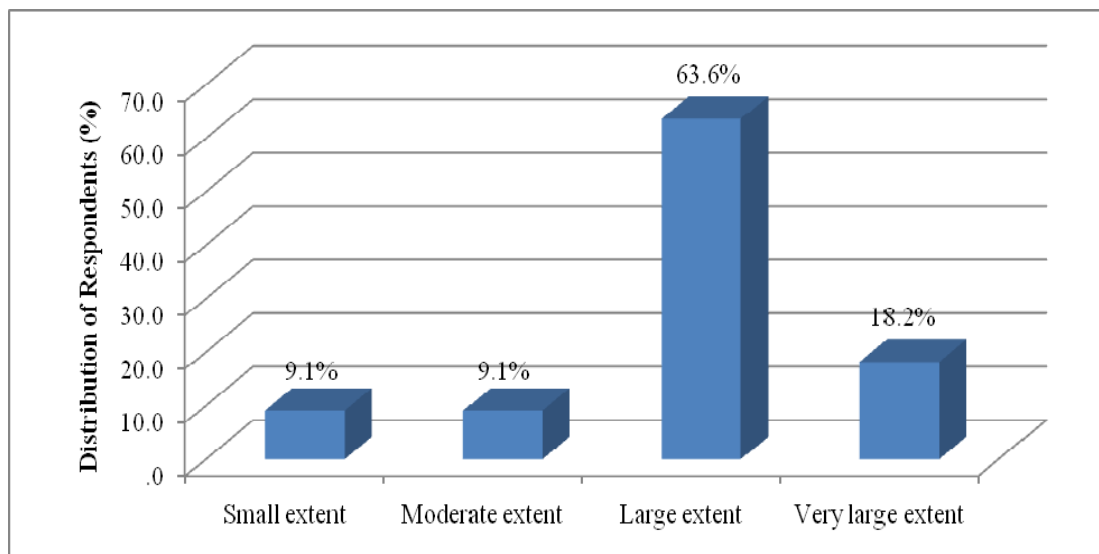


Figure 10. Whether organizational structure influenced reforms process

#### 4.3 Quality of Technical Education

The study sought to determine the quality of technical education. The institutional managers were therefore asked to state their level of agreement with the statements regarding the quality of technical education in their institutions. The study findings on Table 5 above showed that most of the institutional managers (45.5%) disagreed that the institutions produced competent graduates fit for the job market while 18.8% of them strongly agreed with this statement. The results show that on average, the institutional managers (45.5%) were neutral as to whether the graduates were competent and fit into the market or not (mean score, 2.82). The study findings show that most of the institutional managers (27.3%) disagreed that the graduates got absorbed into the job markets. This was confirmed by the mean score (2.45). The findings of the study also show that most of the institutional managers (36.4%) neither agreed nor disagreed with the statement that the number of enrolment in their institutions have been going up. 36.4% of the respondents agreed that there has been minimal drop out of students while 18.2% strongly agreed that there was minimal dropout of students. The findings showed that generally, the respondents agreed that the dropout of students was minimal. There were variances in the responses (standard deviation  $\geq 1$ ). The respondents explained that despite the success in producing many graduates into the job market, the employers had always complained that the graduates are half baked. The respondents also explained that the time allocated for attachment was too short for the graduates to integrate with the practical work.

Table 5. Quality of technical education

	Strongly disagree (%)	Disagree (%)	Neither agree nor disagree (%)	Agree (%)	Strongly agree (%)	Mean	Std. Dev
Institution produces competent graduates fit for the job market	9.1	45.5	18.2	18.2	9.1	2.82	.751
Graduates get absorbed into the job market	9.1	27.3	45.5	18.2	.0	2.45	.522
The number of enrolment has been going up	9.1	18.2	36.4	27.3	9.1	2.27	.647
There is minimal drop out of students	9.1	9.1	27.3	36.4	18.2	3.55	.688

#### 4.4 Correlation Analysis

The study conducted correlation analysis to test the strength of association/relationship between the research variables. Correlation is the measure of the relationship or association between two continuous numeric variables. Correlation analysis results give a correlation coefficient which measures the linear association between two variables (Crossman, 2013). The results in Table 6 showed that the quality of education is positively related to organizational structure with a Pearson Correlation Coefficient of 0.463 and a level of significance of 0.000 hence statistically significant as the p-value is less than 0.05. This relationship was however not very strong but moderate.

Table 6. Correlation

		Organizational structure	Quality of education
Organizational structure	Pearson Correlation	1	.463**
	Sig. (2-tailed)		.000
Quality of education	Pearson Correlation	.463**	1
	Sig. (2-tailed)	.000	

#### 4.5 Regression Analysis

The study further carried out regression analysis to establish the statistical significance relationship between the independent variable, organizational structure and the dependent variable, quality of technical education. According to Green and Salkind (2003) regression analysis is a statistics process of estimating the relationship between variables. It helps in generating equation that describes the statistical relationship between one or more predictor variables and the response variable. The regression analysis results were presented using regression model summary tables, analysis of variance (ANOVA) table and beta coefficient tables.

Table 7 show that the coefficient of determination is 0.903; therefore, about 90.3% of the variation in the quality of technical education is explained by organizational structure. The regression equation appears to be very useful for making predictions since the value of  $R^2$  is close to 1.

Table 7. Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.950 <sup>a</sup>	.903	.866	.119

Table 8 presents the results of the Analysis of Variance (ANOVA) on the organizational structure versus the quality of technical education. The ANOVA results for regression coefficients indicate that the significance of the F is 0.00 which is less than 0.05. This indicates that, overall, the regression model statistically significantly predicts the outcome variable (i.e., it is a good fit for the data). There is therefore a significant relationship between organizational structure and the quality of education.

Table 8. ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	24.209	1	24.209	54.359	.000 <sup>a</sup>
	Residual	88.627	199	.445		
	Total	112.836	200			

The study further determined the beta coefficients of organizational structure verses the quality of education in technical educational institutions. Table 9 thus presents the significant relationship between organizational structure and the quality of education was positive since the coefficient of organizational structure is 0.490 which is significantly greater than zero. The t statistics (7.373) was also greater than zero. This demonstrated that the organizational structure had a positive influence on the quality education in technical educational institutions.

Table 9. Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.888	.122		7.285	.000
	Organizational structure	.490	.066	.463	7.373	.000

## 5. Discussion

The reliability test produced a Cronbach's alpha value of 0.731. The study therefore deduced that the organizational structure indicators were reliable in assessing the effect of organizational structure on the quality of technical education.

The descriptive results demonstrated that organizational structure was one variable which influenced the change process in the technical educational and was therefore had a direct influence on the quality of technical education in Kenya as was evident when 81.8% of the institutional managers indicated that they charged particular groups with the reforms process. The results also showed that majority of the respondents (81.9%) stated that there were plans in the institutions for the implementation of educational reforms. These plans included the mobilization of resources (mean score 4.45), selection of teams to spearhead the reforms process (mean score 4.27), plans for the training of staff (mean score 4.36) and plans for consultation with stakeholders (mean score 4.18). The study established that the majority of the management of the technical educational institutions (81.8%) were inclusive enough to include other staff to participate in the reforms process. The change processes in the institution are mainly headed by a special team assembled for this purpose according to 55% of the respondents. The findings that the management sought to include everyone in the change processes were in agreement with the views of Al-Mashri and Zairi (2000) that the success of the reform processes was the responsibility of the whole organization and not just an individual so as to avoid difficulties associated with the change.

The study findings revealed that the organization coordinated reforms processes between the management and instructors as was indicated by majority of the respondents (73%). The study established that in majority of the technical educational institutions (82%), the management was flexible enough to seek the views of other staff during

the implementation of reforms. These findings were in tandem with the views of Maffae and Meredith (1995) that organizations should adopt flexible structures to encourage greater staff participation, which according to them would improve the problem identification and resolution and enhance performance and quality.

The study established that generally, according to majority of the institutional managers (81.9%), the organizational structure influenced the management of the reforms process in the technical institutions. These findings supported the views of Hrebiniak (2006) that the overreaching issues that impede change in the organization was the organizational structure. This implied that the organizational structure determined the success of the reforms process of which Hrebiniak (2006) explained that the change process were behavioral in nature and therefore the way the organization was structured for the implementation of any reform was very important.

The Pearson Correlation analysis of organizational structure results gave a correlation of 0.463 which demonstrated that organizational structure positively influenced the quality of technical education. Regression model of organizational structure versus the quality of technical education gave a coefficient of determination of R square of 0.903 at 0.05 significant levels. This implied that 90.3% of the quality of technical education is explained by organizational structure. Therefore, there exists a positive relationship between organizational structure and the quality of education in the technical educational institutions in Kenya. The findings also support the views of Enz (2008) and Tarigan (2005) that there exists a significant relationship between organizational structure and the organization performance. The findings therefore meant that organizational structure is a strong predictor of the quality of education.

## 6. Summary of Findings

The study established that according to majority of the institution managers (81.8%), organizational structure influenced the change process in the organization and therefore had a direct influence on the quality of technical education in Kenya. It further showed that according to majority of the respondents (81.9%), the organizations had plans for the implementation of educational reforms which included mobilization of resources (mean score 4.45), selection of teams to spearhead the reforms process (mean score 4.27), training of staff (mean score 4.36) and consultation with stakeholders (mean score 4.18) plans. The study established that majority of the management of the technical educational institutions (81.8%) allowed other staff to participate in the reforms process.

The findings revealed that 73% of the institutional managers, the reforms processes in the organization were coordinated between the management and instructors. Majority of the institution managers (82%) stated the management sought the views of other staff during the implementation of reforms which shares in the views of Maffae and Meredith (1995) that organizations should adopt flexible structures to encourage greater staff participation for enhanced performance and quality. According to majority of the institutional managers (81.9%), the organizational structure influenced the management of the reforms process in the technical institutions.

## 7. Conclusion

From the findings of the study, the researcher concluded that the institutions were structured to suit the reforms that were initiated through assigning special groups to spearhead the change process and putting plans in place for the effective implementation of the reforms. This positively influenced the quality of technical education.

## 8. Recommendations

Technical educational institutions should be structured to suite the particular reform process for effectiveness and achievement of desired results so as to enhance the quality of technical education.

## References

- Al-Mashari, M., & Zairi, M. (2000). Information and business process equality: the case of SAP R/3 implementation. *Electronic Journal on Information Systems in Developing Countries*, 2. Retrieved from <http://www.unimas.my/fit/roger/EJISDC/EJISDC.htm>
- Burns, T., & Stalker, G.M. (1961). *The Management of Innovation*. Tavistock, London.
- Covin, J., & Slevin, D. (1990). New venture strategic posture, structure and performance: an industry life cycle analysis. *Journal of Business Venturing*, 5(2), 123-35. [http://dx.doi.org/10.1016/0883-9026\(90\)90004-D](http://dx.doi.org/10.1016/0883-9026(90)90004-D)
- Enz, C.A. (2008). Creating a competitive advantage by building resource capability. *Cornell Hospitality Quarterly*, 49(1), 73-8. <http://dx.doi.org/10.1177/1938965507311648>
- Gachukia, E. (2007). *Affordable Secondary Education*. Task Force Report, Nairobi.

- Government of Kenya, (GOK). (2005). *Sessional Paper No.1 on Policy Framework for Education, Training and Research*. Nairobi; Government Printer.
- Gunter, H. (2008). Policy and workforce reforms in England. *Educational Management Administrative Leadership*, 36, 253-270. <http://dx.doi.org/10.1177/1741143207087776>
- Hargreaves, A. (2005). Educational change takes ages: life career and generational factors in teachers' emotional responses to educational change. *Teaching and Teacher Education*, 21(8), 967-983. <http://dx.doi.org/10.1016/j.tate.2005.06.007>
- Harris, A. (2009). Big change question: does politics help or hinder education change? *Journal of Educational Change*, 10, 63-67. <http://dx.doi.org/10.1007/s10833-008-9093-7>
- Harris, A. (2011). Reforming systems: Realizing the fourth way. *Journal of Educational Change*, 12(2), 159-171. <http://dx.doi.org/10.1007/s10833-011-9156-z>
- Hrebiniak, L.G. (2006). Obstacles to Effective Strategy Implementation. *Organizational Dynamics*, 35, 12-31. <http://dx.doi.org/10.1016/j.orgdyn.2005.12.001>
- Jamila, R. (2012). *The management of educational change in Pakistani Educational Institutions*. Thesis for University of Glasgow.
- Kazmi, A. (2008). *Strategic Management and Business Policy* (3rd ed.). New Delhi, Tata McGraw- Hill Publishing Company Limited.
- Kennedy, K., & Lee, J.C.K. (2008). *The Changing Role of Schools in Asian Societies– Schools for the Knowledge Society*. London: Routledge.
- Levin, B. (2007). *Curriculum for the 21st century: Does curriculum matter?* Education Services Australia. Retrieved November 25, 2013, from <http://www.eqa.edu.au/site/doescurriculummatter.html>
- Levin, B. (2009). Does politics help or hinder education change? *Journal of Educational Change*, 10, 69-72. <http://dx.doi.org/10.1007/s10833-008-9092-8>
- Levin, B. (2010). Governments and education reforms: some lessons from the last 50 years. *Journal of Education Policy*, 25(6), 736-747. <http://dx.doi.org/10.1080/02680939.2010.523793>
- Levin, B., & Fullan, M. (2008). Learning about system renewal. *Educational Management Administration Leadership*, 36(2), 289-303. <http://dx.doi.org/10.1177/1741143207087778>
- Maffei, M.J., & Meredith, J. (1995). Infrastructure and flexible manufacturing technology: theory development. *Journal of Operations Management*, 13(4), 273-98. [http://dx.doi.org/10.1016/0272-6963\(95\)00034-8](http://dx.doi.org/10.1016/0272-6963(95)00034-8)
- Mugenda, O.M., & Mugenda A.G. (2003). *Research Methods, Quantitative and Qualitative Approaches*. Nairobi, Kenya. ACT S Press.
- Ojiambo, O. C. P. (2009). Quality of Education and Its Roles in National Development: A Case Study of Kenya's Educational Reforms. *Kenya Studies Review*, 1(1), 133-149.
- Owate, W.O. (2012). *Highlights of the Technical and Vocational Education and Training Bill, 2012*. Presented at the workshop on Education, Training and Research Policy, Science, Technology and Innovation Policy and Legal Frameworks for Members of Parliament.
- Robbin, S.P., & DeCenzo, D.A. (2005). *Fundamentals of Management: Essential Concepts and Applications*. Prentice Hall, Upper Saddle River, NJ.
- Robbins, S. (2003). *Organizational Behavior* (10th ed.). Upper Saddle River, NJ: Prentice Hall.
- Senge, P. et al. (2008). *The necessary revolution – How individuals and organizations are working together to create a sustainable world*. New York: Doubleday.
- Tarigan, R. (2005). An evaluation of the relationship between alignment of strategic priorities and manufacturing performance. *International Journal of Management*, 22(4), 586-98.
- Zeina, O. E. (2009). *Employee Involvement in the Implementation of a Sustainability Strategy*. Unpublished Thesis of Harvard University.