

THE INTERNATIONAL JOURNAL OF HUMANITIES & SOCIAL STUDIES

Influence of Training on the Maintenance of ISO 9000 in Higher Learning Institutions: A Case of University of Kabianga, Kenya

Dr. Andrew Kibet Kipkosgei
Lecturer, University of Kabianga, Kenya

Abstract:

Training and education are important in preparing a company for change. Institution has realized that they need to survive in the competitive market and they must focus on quality of product and services they provide to clients. The purpose of the study is to investigate the training related factors influencing maintenance of ISO 9000: 2008 in higher institution of learning. The objective of the study was to examine the training related factors influencing maintenance of ISO 9000: 2008 at University of Kabianga. The study adopted a world-polity institutional theory. The study adopted the descriptive survey research design. The target population was 450 respondents drawn from the University of Kabianga and Campuses. It comprises of the university Quality assurance director, Quality assurance and compliance supervisors, quality assurance teaching and non-teaching staff and students. The study adopted stratified, simple random sampling and purposive sampling technique to select a sample size of 135 respondents. Questionnaires and interviews were used as tools to collect primary data. Secondary data was obtained through reviewing the documents that is of relevance to the findings of this study. Data was analyzed through descriptive (frequency and percentages) and inferential statistics (person product correlation coefficient) and findings presented using tables. There was a positive relationship between the training related factors on maintenance of ISO 9000 [$r=.453$, $n=120$, $p<.05$], indicating a positive correlation between training related factors on maintenance of ISO 9000. Thus, the longer the employee is training the higher the maintenance of ISO 9000. Training employee on ISO 9000 maintenance is the most important factor in improving quality in university and has provided evidence of a critical factor for the successful implementation of QMS. The success of quality program depended on the university management and culture and university with ISO certification experienced benefits. Maintenance of ISO 9000 has enabled effective evaluation of lecturers in the university. The findings of this study will significantly benefit University of Kabianga and other institutions of Higher learning with ISO certification through developing appropriate strategies on how to maintain ISO 9000: 2008.

Keywords: ISO 9000: 2008, Training, Maintenance, Quality

1. Introduction

Training and education are significant in the preparation of companies for change (Zaramdini, 2007). A study by Gader *et al.* (2009) found out that several researchers have highlighted the importance of training and the role of human resources, and they have provided evidence of the critical factors for the successful implementation of QMS and the improvement of business performance. Therefore, poor education as Newall and Dale (1990) noted and lack of training present a major obstacle in the development and implementation of a quality program, while lack of understanding and the right training are considered to largely contribute to worker resistance. This sentiment is supported by Lipovatz, Stenos and Vaka (1999) who indicated in their study that lack of proper training of workers is correlated with a lack of involvement, while continuous training of the managerial staff and of personnel contributes to the workers' motivation and to a decrease in the amount of preparation time needed. In fact, good training and communication can remedy obstacles related to the human factors and system implementation. They also concluded that poor education and training present major barriers to the development and implementation of a QMS in Greek companies. Training and education are important in preparing a company for change. Since much has been done on the importance of human resource on business improvement, this current researcher investigated on training as a factor affecting ISO 9000 maintenance.

Additionally, education and training programmed are an on-going process that facilitates quality improvement in any organisation. The training and education program must be both formal and informal (Robert, 1996). Moreover, insufficient training programmers' have been found to be barriers in implementing ISO 9000 standards in Brazilian organisations. In developing countries, inadequate training of employees and lack of commitment to motivate employees are key obstacles to quality, Prasad and Tata (2003).

Poor education and training present major obstacles in the development and implementation of a quality management system in many organizations. Training and education are important for the preparation of an organization for change. The training of both the top management and the other personnel in an organization should be repeated regularly and be continued after certification. The training

programs are important for the proper implementation of the system, Lipovatz (1999). Moreover, Ashire *et al.* (1996) reported that the organization should consider costs of training programs as investments in human resources.

Numerous studies have been conducted on ISO certification and varied results reported. However, studies do not generally address what happens in organizations after the implementation quality management systems (Ab Wahid and Corner, 2009). Many of the studies reviewed were conducted majorly in business organizations like Amar and Zain (2002) conducted their study in Indonesia, Dickenson, Campbell And Azarov (2000) did theirs in a Spanish organisations whereas Srinidhi (1998) and Samson (1997) did their study in Australia, New Zealand and New Jersey which are far away from the area where the current study was conducted and the goals and objectives are definitely different given that the current study is being conducted in an educational set-up. Other reviewed studies focused on factors affecting ISO 9000 maintenance which included lack of time, lack of knowledge Sampaio, Saraiva and Rodrigues (2009).

Other studies investigated on cost related factors and ISO maintenance in business organizations (Ashrafi, 2008 & White *et. al* 2009) and this provoked the researcher to find out if the same factors affect ISO 9000 maintenance in a learning institution and specifically a university. Most of the reviewed studies were conducted in countries, which are different in terms of culture, and the countries are far away from the area of study of the present study thus the reason why this present study was conducted in Kenya and in a learning institution. The training strategy assessment scale in any organization is measured by availability of training resources, number of training and retraining times of every employee, employee's satisfaction for training and level of employee's participating in the same training session. Kenya has over 130,000 students enrolled in local universities. This translates into a Gross Enrolment Ratio (GER) of 3%, which is lower than the 5% GER expected for sub-Saharan Africa (Otunga 2010). None of the studies considered a holistic framework that links the motivation for implementing ISO 9000 standards, the internalization of practices underlying ISO 9000 standards, and operational and business level performance. This study sought to was to examine the training related factors influencing maintenance of ISO 9000: 2008 at University of Kabianga as a case study.

2. Research Methodology

The study adopted the descriptive survey research design that involves gathering data, describe events and then organizes, tabulates, depicts, and describes the data collection (Glass & Hopkins, 1984). Descriptive studies have an important role in educational research as it greatly increases our knowledge about what happens in University by involving a broad category of quality assurance team in the said public university. This therefore, enabled the researcher to collect data from specific departments. The target population of this study was 450 respondents drawn from University of Kabianga and comprises of the university Quality assurance, Quality assurance and compliance supervisors, quality assurance teaching and non-teaching staff. This is because the University has implemented ISO 9001 and they are still in the process of maintenance and therefore this study sought to investigate the factors affecting maintenance of ISO. The target population was 450 respondents from 5 departments of University of Kabianga.

Simple random sampling was used to select the non-teaching staff for the study. This procedure ensured that all the members of population were given equal chances of being included in the sample. The results obtained from probability or random sampling was assured in terms of probability. This was the reason why random sampling was considered as the best technique of selecting a representative sample (Kothari, 2008). Purposive sampling was used to select the management staff. Gay (2003) recommends that when the target population is small (less than 1000 members), a minimum sample of 20% is adequate for educational research. The researcher used purposive sampling to select all managers and simple random sampling to select 45 teaching staff and 75 non-teaching staff. From the target population, the researcher used proportionate sampling to select 135 participants and was in line with Gay's (2003) recommendation. The sample size comprises of 15 management staff, 45 teaching and 75 non-teaching staff respectively. Before collecting data from the respondents in the study area, an introductory letter was given from the University management, and the researcher then proceeds to the University with the documents. Before the actual study, the researcher conducted a pilot study at the University of Nairobi. The purpose of the pilot study was to enable the researcher to ascertain the reliability and validity of the instruments, and further to familiarize with the administration of the questionnaires. Therefore, improve the instruments and procedures in the study area.

The main research instrument that was used in this study are questionnaire and interview schedule. The researcher constructed closed-ended and open-ended questionnaires, which was administered to employees. This allowed the researcher to draw conclusions based on comparisons made from the responses. Therefore, the researcher used questionnaires because of its low cost and even, it is free from bias, in that respondents have adequate time to give well thought answers and large samples can be made use of Questionnaire. The interview schedule designed was structured according to research objectives.

The researcher discussed the items in the instrument with the employees of ISO and compliance department. Advice given by these people helped the researcher to determine the validity of the research instruments. The advice included suggestions, clarifications and any other input. These suggestions were used in making necessary changes. The questionnaires administered twice within a period of two weeks. In order to test the reliability of the instrument used in the study, the test-retest method used. Cronbach's Coefficient Alpha was used to determine the reliability of the research instrument. So, a reliability coefficient of 0.8 or over, was assumed to reflect the internal reliability of the instruments (Fraenkel & Wallen, 2000). The entire questionnaire deemed as straightforward and reliable; after several typographical errors and omissions detected are corrected in the instrument, confirming that it is sufficient to be used in the main study.

After all data, had been collected, the researcher conducted data cleaning, which involved identification of incomplete or inaccurate responses, thus correct to improve the quality of the responses. The research yielded both qualitative and quantitative data. The correlation analysis was used to establish the relationship between two variables in a linear fashion. Pearson product moment

Correlation Coefficient was employed to establish the relationship between training and maintenance of ISO 9000. It was appropriate to use the technique for interval and ratio-scaled variables and determine the relationship between dependent and independent. A Pearson correlation coefficient was used when working with continuous data, in other words, data on the interval or ratio level of measurement. After analysis, data was presented in tabular form using frequencies and percentages alongside inferential statistics.

3. Results

3.1. Training Related Factors Affecting the Maintenance of ISO 9000

The third objective was to establish the training factors influencing maintenance of ISO 9000 in University of Kabianga. This was found to be important in determining the effect of training on maintenance of ISO 9000. The researcher sought to find information on the respondent's views on the training factors that may influence maintenance of ISO 9000 as presented in the Table 1. This was done by establishing the weighted averages and it showed that all the statements used to answer the time related factors were all above 3.6. This showed that the respondents rated the all the statements very highly in maintenance of ISO 9000. From the study the highest weighted average was 4.38 that training employee on ISO 9000 maintenance is the most important factor when it comes to improving quality in any university as well as 4.31 that training acts as a vehicle for communication, it raises skills of employees to take part in the improvement process. From the study the lowest weighted average was 3.61 that poor education and training present a major obstacle in the development and implementation of a quality programme and that the university has a clear relationship between training investment and the achievement of strategic objectives. From the study training employee on ISO 9000 maintenance is the most important factor when it comes to improving quality in any university and training has provided evidence of the critical factors for the successful implementation of QMS and the improvement of its performance. Poor education and training present a major obstacle in the development and implementation of a quality programme and insufficient training programmes have been found to be barriers in implementing ISO 9000 standards in institutions.

Training related factors	Strongly agree 5		Agree 4		Undecided 3		Disagree 2		Strongly disagree 1	
	F	%	F	%	F	%	F	%	F	%
Training employee on ISO 9000 maintenance is the most important	67	55.8	45	37.5			3	2.5	5	4.2
Training has provided evidence of the critical factors	31	25.8	81	67.5					8	6.7
Poor training present a major obstacle in the development and implementation	33	27.5	44	36.7	14	11.7	21	17.5	8	6.7
Insufficient training programmes have been found to be barriers in implementing ISO 9000	35	29.2	59	49.2	3	2.5	15	12.5	8	6.7
The training of both the top management in the university should be appraised regularly	46	38.3	57	47.5	6	5.0	6	5.0	5	4.2
The university has a clear relationship between training investment	29	24.2	44	36.7	27	22.5	11	9.2	9	7.5
Training as an important factor to the QM change process and provides initial awareness	36	30.0	69	57.5	4	3.3	8	6.7	3	2.5
Training acts as a vehicle for communication, it raises skills of employees to take part in the improvement process.	51	42.5	60	50.0	4	3.3	5	4.2		
Training helps the employees in the university to reform their attitudes towards attaining quality	51	42.5	55	45.8			6	5.0	8	6.7
Maintenance of ISO 9000 has led to employee training	50	41.7	35	29.2	12	10.0	14	11.7	9	7.5

Table 1: Training related factors affecting the maintenance of ISO 9000

Training of both the top management and the other personnel in the university should be appraised regularly and the university had a clear relationship between training investment and the achievement of strategic objectives towards maintenance of ISO 9000. Training as an important factor to the QM change process and provides initial awareness of the fundamentals of ISO 9000 and acts as a vehicle for communication, it raises skills of employees to take part in the improvement process. Training helps the employees in the university to reform their attitudes towards attaining the set quality standards and maintenance of ISO 9000. The management established that training related factors affect the implementation of ISO 9000 in the university. Training was required to enhance appraisal of staff and to evaluate for success. Continuous training is required to ensure that there is consistency and training was only done quarterly to create awareness and has led to non-conformities increase as induction done once among the new staff. The sponsorship was done at certain high levels of management leading to marginalization of those who should be part of implementation of ISO 9000. The scheme of service was not fully implemented due to limited offices and recruitment of external staff to steer the programme and introduce new methods of improvement of services.

3.2. Influence of Training Related Factors on the Maintenance of ISO 9000

There was a positive relationship between the training related factors on maintenance of ISO 9000 [$r=.453$, $n=120$, $p<.05$], (Table 2), indicating a positive correlation between training related factors on maintenance of ISO 9000. Thus, the longer the employee is training the higher the maintenance of ISO 9000.

		Maintenance	Training
Maintenance	Pearson Correlation	1	
	Sig. (2-tailed)		
Training	Pearson Correlation	.453**	1
	Sig. (2-tailed)	.000	

Table 2: Influence of training related factors on the maintenance of ISO 9000

** Correlation is significant at the 0.01 level (2-tailed).

$N=120$

The findings agree with Oakland (1996) that training is the most important factor when it comes to improving quality and that training programmers should be provided and assessed and their effects evaluated. It agrees with Gader et al. (2009) that highlighted the importance of training and the role of human resources, and they have provided evidence of the critical factors for the successful implementation of QMS and the improvement of business performance.

The findings agree with Lipovatz, Stenos and Vaka (1999) that the lack of proper training of workers is correlated with a lack of involvement, while continuous training of the managerial staff and of personnel contributes to the workers' motivation and to a decrease in the amount of preparation time needed. Good training and communication can remedy obstacles related to the human factors and system implementation. Furthermore, Patel and Randell (1994) mentioned that proper quality training for the professionals should be required to improve the manner of managing a quality management system. An organization should have a clear relationship between training investment and the achievement of strategic objectives.

Robert (1996) indicated that education and a training program is an ongoing process that facilitates training in any organization. The education and training program must be formal and informal. The employee's training programs should start to appreciate the organization's quality initiatives and understand the effects of globalization and competitiveness has on their work and the future of their organization.

Training acts as a vehicle for communication, it raises skills of employees to take part in the improvement process. Also, it helps the employees in the organization to reform their attitudes towards quality. Training and improvement in knowledge and skills enable individuals to achieve objectives such as systematic problem-solving skills and process-conscious approach. Training and education are important in preparing a company for change. Additionally, education and training programmed are an on-going process that facilitates quality improvement in any organisation. Insufficient training programmers' have been found to be barriers in implementing ISO 9000 standards in Brazilian institutions. Poor education and training present major obstacles in the development and implementation of a quality management system in many organizations. Training and education are important for the preparation of an organization for change. The training of both the top management and the other personnel in an organization should be repeated regularly and be continued after certification.

4. Conclusions

There was a positive relationship between the training related factors on maintenance of ISO 9000. From the study training employee on ISO 9000 maintenance is the most important factor when it comes to improving quality in any university and training has provided evidence of the critical factors for the successful implementation of QMS and the improvement of its performance. Poor training/non-present a major obstacle in the development and implementation of a quality programme and insufficient training programmes have been found to be barriers in implementing ISO 9000 standards in institutions. Maintaining ISO 9000 does certainly require the involvement of several resources, especially human and financial resources and adequate financial resource is only needed by the institution during ISO 9000 implementation process. Training employee on ISO 9000 maintenance is the most important factor in improving quality in university and has provided evidence of a critical factor for the successful implementation of QMS. The success of quality program depended on the university management and culture and university with ISO certification experienced benefits. Maintenance of ISO 9000 has enabled effective evaluation of lecturers in the university.

5. Recommendations

Based on the findings the following recommendations were made;

The training of both the top management and the other personnel in an institution should be done regularly and continued after certification. Ideally, an organization should have a clear relationship between training investment and the achievement of strategic objectives.

Management should ensure the availability of necessary resources to achieve quality objectives and to review the continuing development, suitability, adequacy and effectiveness, in the light of quality policy/quality manual as compared with the organization's performance.

Communication should be a two-way traffic so as to allow exchange of information, knowledge/idea in order to realize set targets and standards by sometimes convening a participative discussion starting from the bottom and working up to the top.

6. References

- i. Ab Wahid, R. and J. Corner (2009). "Critical Success Factors and Problems in ISO 9000 Maintenance." *International Journal of Quality & Reliability Management* 26(9): 881-893.
- ii. Amar, K. and Zain, Z. M. (2002) 'Barriers to implementing TQM in Indonesian manufacturing organizations', *Tqm Magazine*, 14 (6), pp. 367-372.
- iii. Ashrafi, R. (2008) 'A review of ISO 9001:2000 quality management practices in Oman', *International Journal of Productivity and Quality Management*, 3 (1), pp.74-105.
- iv. Gader, A.M.A., Ismail, M.Y., Hamouda, A.M.S. and Al-Khalifa, K. (2009) 'ISO 9000 performance among the Malaysian companies: the effects of motives', *International Journal of Industrial and Systems Engineering*, 4 (1), pp. 32-45.
- v. Gay, L. R. (2003). *Educational Research, Competences for Analysis and Application*. Ohio: Charles E. Merrill Publishing, Co.
- vi. Fraenkel, J.R. & Wallen N.E. (2000). *How to Design and Evaluate Research in Education*. (5thed) New York: McGraw Hill Inc.
- vii. Kothari C.R. (2008) *Research Methodology, Methods and Techniques*. Wishwa Pral Delhi
- viii. Lipovatz, D., Stenos, F. and Vaka, A. (1999) 'Implementation of ISO 9000 quality systems in Greek enterprises', *International Journal of Quality and Reliability Management*, 16 (6/7), pp. 534-551.
- ix. Newall, D. and Dale, B. (1990) 'The introduction and development of a quality improvement process: a study', *International Journal of Production Research*, 29 (9), pp.1747-60.
- x. Oakland, J. S. (2004) *Oakland on quality management*. Oxford: Elsevier Butterworth Heinemann.
- xi. Otunga, R. N. (2010) *The Dilemma of Curriculum Relevance in Kenya*. Moi University Inaugral Lecture 10 Series No.2, 2010. Moi University Press, Moi University-Eldoret. 2010.
- xii. Prasad, S. and Tata, J. (2003) 'The role of socio-cultural, political-legal, economic, and educational dimensions in quality management', *International Journal of Operations and Production Management*, 23 (5/6), pp. 487-521.
- xiii. Robert, M. (1996) 'Overcoming the barriers to TQM's success: A road map of potential hazards along the TQM journey', *Quality Progress*, 29 (5), pp. 53-55.
- xiv. Sampaio, P., Saraiva, P., Rodrigues, A.G. (2009) 'ISO 9001 certification research: questions, answers and approaches', *International Journal of Quality and Reliability Management*, 26 (1), pp.38-58.
- xv. Samson, D. (1997) 'Progress in total quality management: evidence from Australasia', *International Journal of Quality Science*, 2 (4), pp. 214-235.
- xvi. Srinidhi, B. (1998) 'Strategic quality management', *International Journal of Quality Science*, 3 (1), pp. 38-70.
- xvii. White, G.R.T., Samson, P., Rowland-Jones, R. and Thomas, A.J. (2009) 'The implementation of a quality management system in the not-for-profit sector', *The TQM Magazine*, 21 (3), pp.273-283.
- xviii. Zaramdini, W. (2007) 'An empirical study of the motives and benefits of ISO 9000 certification: the UAE experience', *International Journal of Quality and Reliability Management*, 24 (5), pp. 472-491.