

Effect Of Resource Management On Students' Satisfaction In ISO 9001: 2008 Certified Universities In Kenya

Hilary Kipchirchir Kandie

Department of Business Administration, School of Business,
College of Human Resource and Development,
Jomo Kenyatta University of Agriculture and Technology (Kenya)

Dr. Wario Guyo (PhD)

Director and Senior Lecturer, Nairobi CBD Campus,
Jomo Kenyatta University of Agriculture and Technology (Kenya)

Dr. (Eng.) Thomas A. Senaji (PhD)

Kenya Methodist University (Kenya)

ABSTRACT

In the present competitive business environment, quality of products and/service offered by any organization play an important role in determining the satisfaction of the customer. Customer satisfaction on the other hand contributes to firm performance. Similar to other organizations, universities endeavor to ensure quality of their service is attractive to the customers. To enhance the confidence in the quality of teaching, learning and research, most Universities in Kenya choose to be certified on ISO 9001 quality management standard. The Standard requires the organizations to establish a quality management system (QMS) to ensure provision of quality services and products that satisfy the customers. Since quality of university education has been a subject of concern in Kenya, there is need to understand what action is being taken to address the quality concerns. It is against this background that the study sought to establish the role of resource management based on ISO 9001 standard on the students' satisfaction in ISO 9001:2008 certified universities in Kenya. A sample of 384 students drawn from all the 24 certified universities participated in the study. Data was collected using questionnaires. Quantitative data analysis methods used to generate frequency distribution, descriptive and inferential statistics. Specifically, ordered probit regression model was used to analyse the data using STATA software whereas chi square test was used to test the hypotheses related to students' satisfaction. The findings established that resource management enhanced the students' satisfaction among the ISO 9001 certified universities in Kenya. The inferential statistics analysis revealed that resource management was positively and significantly related to students' satisfaction. It is concluded that ISO 9001 certified universities in Kenya had better students' satisfaction as a result of resource management. Based on the findings it is recommended that the universities should embrace better strategies to enhance the satisfaction of the students through resource management, a better effective leadership management, enhance product realisation and cultivate a culture of improvement management of the Quality Management Systems (QMS).

Key Words: Resource management, Students' satisfaction, ISO 9001 , and Universities in Kenya.

INTRODUCTION

Background of the Study

The global growth of enrolments in university education can be explained by the emergence of a private tertiary education sector. While public universities have continued to grow, the number of private universities has exploded (Wanzala, 2013). The World Bank notes that

private university education has become the fastest growing segment of university education worldwide (World Bank, 2009; Clothey, 2011; McCowan, 2008; Waweru, 2013). University education plays an important role in the development of the knowledge based economy in a highly competitive and rapidly changing global environment (Ojiambo, 2009) consequently Kenya's university education system must be focused, efficient and able to create knowledge and deliver relevant and quality learning to sustain a knowledge economy that is internationally competitive (MOE, 2012) and satisfactory to the students/learners and stakeholders in the society.

Quality Management System

Saizarbitoria (2006) stated that there are many quality management systems approaches used by organizations to achieve quality products/services and customer satisfaction. These include lean management, Six Sigma and total quality management (TQM) and the most common approach is ISO 9001 quality standard. According to Manders, (2014) ISO 9001 sets out the requirements for a quality management (QMS) system where an organization can demonstrate its capability to deliver quality products and services that fulfil customer and regulatory requirements. It is designed to help organizations ensure that they meet the needs of customers and other stakeholders (Lushi, Mane, Kapaj & Keco, 2016). In this regard 32 universities have implemented QMS based ISO 9001 standard. According to Kumar and Balakrishnan (2011) ISO 9001 certified organizations are supposed to have effective QMS and quality products/services. This study will seek to explore the role of adopting ISO 9001 certification as quality management strategy by Universities in Kenya to enhance students' satisfaction.

ISO 9001 standard in the University Education System

The ISO 9001 is a generic standard that is applied and implemented to any QMS in any business: for profit, not for profit, government agencies or academic institutions (El Abbadi, Bouayad & Lamrini, 2013). Organizations, including universities require management systems to control and utilize its resources towards fulfilling its mission and goals (Ismail & Gadar, 2008). According to Ismail and Gadar (2008), a quality management system is required to direct and control an organization with regard to quality product and services to enhance customer satisfaction. It requires that all the activities necessary to produce the product or service be documented if the quality management system is to conform to the standard (Lazibat, Sutic & Jurcevic, 2009). ISO 9000 standards have also become a popular choice for universities worldwide (Thonhauser, 2005; Singh & Sareen, 2006; El Abbadi, Bouayad, & Lamrini, 2013).

Statement of the Problem

Universities just like any other business need to understand the perception of the students (customers) regarding the services offered (Naidoo, 2011). According to Helgesen and Nasset (2007), Purgailis and Zaksa (2012), Sultan (2013), Yusoff and Woodruffe-Burton (2015) students' satisfaction is an outcome of quality service which is driven by quality management system established by the university. To enhance the quality of services offered in universities and heighten students' satisfaction, it is essential to adopt QMS based on ISO 9001 standard (Sarbu, Ilie, Enache & Dumitriu, 2009). However, despite the merit that surrounds QMS and ISO 9001 standard; there has been growing concern on its influence on the customer satisfaction (Lazibat, Sutic, & Jurcevic, 2009; and Mabururu, 2011).

Empirical studies on implementation of quality management systems have brought a conflicting debate between QMS based on ISO 9001 and customer satisfaction. For instance,

Becket and Brookes (2006); Papadimitriou and Westerheijden (2010); and Lushi et al. (2016) established that implementation of the QMS such as the ISO 9001 played a key role in enhancing quality of services and/or products offered by the organizations thus promoting satisfaction among the customers. On the other hand, Mehralizadeh and Safaeemoghaddam, (2010); and Vusa (2016) contended that customer satisfaction was mainly determined by the customer service and ability of the organizations to meet their needs but not through implementation of some QMS based on ISO 9001. This explicitly shows the need for a study to clear the doubt on the roles of QMS based on ISO 9001 on customer satisfaction.

The studies on influence of QMS on students' satisfaction were conducted in more than a decade ago where much has changed since then in relation to service and/or product quality and the strategies of quality management as well (Faganel & Macur, 2005; Poksinska, Kahlgaard & Antoni, 2002; and Sakthivel, Rajendran & Raju, 2005). Locally, the studies on QMS and satisfaction focused on other industries such as state corporations and NGOs unlike the current study that focused on educational sector which is a major sector as far as country's development and growth is concerned. Mekic and Goksu (2014) and Lushi, Mane, Kapaj and Keco (2016) in their studies on influence of QMS implementation and customer satisfaction used regression model to carry out the analysis. The current study adopted a different model, the ordered Probit model which according to O'Connell (2006) fulfills the requirements for both discrete and ordinal outcomes. Majority of the previous studies were carried out in developed countries such as Canada and UK where the systems and organizational management strategies are more diverse unlike the current study which was carried out in Kenya which is a developing country.

Based on the gaps reviewed, the current study was therefore deemed appropriate to examine the relationship between ISO 9001 Quality Management System implementation and students' satisfaction. Specifically, the influence of resource Management on students' satisfaction in ISO 9001 certified universities in Kenya

Research Objective

The general objective of this study was to determine the role of resource management program in quality management system implementation on Students' satisfaction in ISO 9001:2008 certified universities in Kenya

Research Hypotheses

H_A: QMS resource management has a positive significant influence on students' satisfaction positively in ISO 9001 certified universities in Kenya.

LITERATURE REVIEW

Theoretical Review

Quality Management Systems

Quality management (QM) is a set of opinions and ideas for improving the quality of products or services, which widely called "management philosophy" (Al-Ibrahim, 2014). Its main aims are to satisfy customers and survive in the market (Neyestani and Juanzon, 2016). Without doubt, quality experts (gurus) had the significant roles to expend and transform the concept of quality from a mere technical system to a broader body of knowledge known as total quality with management implications in production (Maguad, 2006).

Quality Gurus

Historically, QM was first emerged by the contributions of quality gurus, such as Deming and Juran in Japan after Second World War. Then Crosby, Feigenbaum, Ishikawa, and others had

developed this powerful management technique for improving business quality within the organizations. During the period 1980s to 1990s, many national and international quality awards (QAs) have been established to provide guidelines for implementing TQM based on the suggestions and theories of QM gurus (Neyestani and Juanzon, 2016). The gurus extensively made substantial contribution to quality management by their theories in improving quality. QM techniques and tools could be innovated by these theories(Alamri, Alharthi, Alharthi, Alhabashi, & Hasan, 2014).

Quality Management Principles

Levitt (2005) stated that ISO 9001 requirements are based quality management principles which are: Customer Focus, Leadership, Involvement of people, Process Approach, System Approach to Management, Continuous Improvement, Factual Approach to Decision Making, and Mutually Beneficial Supplier Relationships which are embedded in ISO 9001:2008 standards (Pryor, Toobs, Anderson & White, 2007; Cianfrani & West, 2009; Sheps, 2011). Quality management principles establish the direction for the people in charge of establishing and documenting the ISO 9001 standard for all interested stakeholders (Nyuke & Gasva, 2015). Implementing ISO 9001 QMS in a university requires the institution to establish a quality management system to ensure that all activities and processes in teaching and learning meet the specified requirements consistently. The ISO 9001:2008 provides a framework for a university to direct and control all processes and resources specified by statutory bodies, internal and external customers, stakeholders and prospective employers are met (Lazibat,

Resource input model

The resource - input model proposed by Cheng and Tam (1997) to evaluate the concept of education quality and students' satisfaction. It illustrates the different conceptions that can be used to deepen the understanding of and development of quality management strategies (Ling, Piew & Chai, 2010). The model stresses the importance of obtaining scarce and quality resource inputs to the education institutions to fulfill various objectives and to provide quality services in a short period of time. It assumes that the quality of education and students' satisfaction depends on the quality of resource input (Tam & Cheng, 1996). According to Cheng (2003), the education quality and students' satisfaction indicators for the resource-input model may include high quality student intake, more qualified staff recruited, better facilities and equipment, better staff-students ratio, and more financial support.

Education, awareness and training are some of the key elements of QMS in which many people are involved, so the success of the implementation depends directly on how well they have been done (Alharbi & Yusoff, 2012). To effectively support their quality effort, organizations need to implement an employee compensation system that strongly links quality and customer satisfaction with pay (Brown *et al.*, 1994). An organization's quality management system initiative must be supported with a recognition and reward system that encourages and motivates employees to achieve the desired performance. Organizations that are serious about achieving quality and customer satisfaction must integrate these aspects of QMS into their recognition and reward system.

Organizational learning model

Organizational learning model proposed by Cheng and Tam (1997) to evaluate the concept of education quality and illustrate the different conceptions that can be used to deepen understanding and develop management strategies. The organizational learning model assumes that Quality of education is a dynamic concept involving continuous improvement and development of staff, practices, process, and outcomes of a University (Cheng & Tam, 1997). A

number of researchers have indicated that organizations, like human beings, can be empowered to learn and innovate to provide quality services (Fullan, 1993; Schmuck and Runkel, 1985; Senge, 1990). This model emphasizes the importance of learning behavior for ensuring quality in education; whether the internal process is currently smooth is not so critical (Cheng & Tam, 1997). This line of thinking supports the current emphasis of strategic management and development planning in education (Dempster *et al.*, 1993; Hargreaves & Hopkins, 1991). The model is useful when educational institutions are developing or involved in educational reform, particularly in a changing external environment (Cheng & Tam, 1997). The indicators of education quality may include awareness of community needs and changes, internal process monitoring, programme evaluation, environmental analysis and development planning.

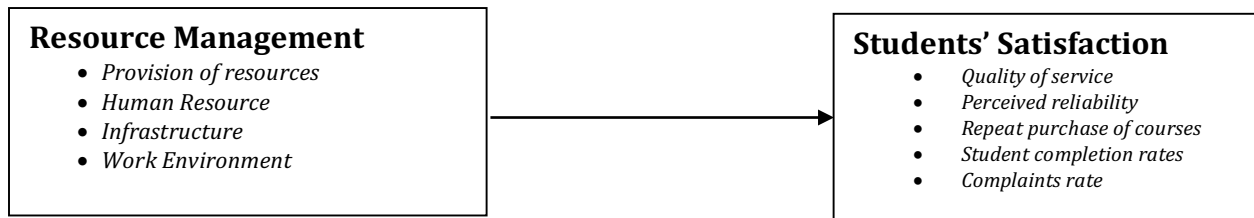
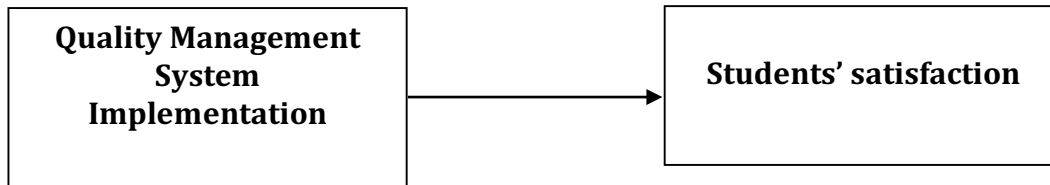
In developing countries, there are many new educational institutions because of the expansion of the education systems (Cheng & Tam, 1997). The new institutions have to face many problems in establishing organizational structures, educational processes, dealing with poor quality students, developing staff, and struggling against adverse influences from the community (Cheng & Tam, 1997). Also, changes in the economic and political environment demand an effective adaptation of the education system in terms of curriculum change, management change, and technology change (Cheng, 1995b). Against such a background, this organizational learning model may be appropriate for studying education quality.

According ISO (2008), Education, Awareness and training are one of the key elements of Quality Management System in which many people are involved, so the success of the implementation depends directly on how well they have been done (Kanji & Asher, 1993; Alharbi & Yusoff, 2012). In an organization, all of the management, supervisors, and employees should accept quality education and training. Quality education and training include quality awareness education and basic quality management methods, such as statistical process control, problem solving methods, basic tools and techniques.

SERVQUAL Model

The SERVQUAL model was made of ten dimensions of service quality when created; tangibles, reliability, responsiveness, communication, credibility, security, competence, courtesy, understanding the customer, and access, (Parasuraman *et al.*, 1985) but later on these dimensions were reduced to five because some dimensions were overlapping (communication, credibility, security, competence, courtesy, understanding customers and access) and they included, Tangibles- physical facilities, equipments, and staff appearance. Reliability- ability to perform the promised service dependably and accurately; Responsiveness- willingness to help customers and provide prompt service; Assurance- knowledge and courtesy of employees and their ability to inspire trust and confidence; Empathy- caring, individual attention the firm provides its customers (Parasuraman *et al.*, 1988). A Service quality result from a comparison of perceived with expected performance and is based on the disconfirmation paradigm, which creeps in from the discrepancies between prior expectation and actual performance.

Conceptual Framework



Resource Management

Resource management is the efficient and effective deployment of organization's resources when they are needed (Clegg & Bailey 2008; Miller, 2007). Clause 6 of ISO 9001 draws together the entire resources-related requirements (Hoyle, 2009). Resource management is a key business processes in all organisations. In practice, resource management is a collection of related processes that are often departmentally oriented. This variable is anchored on Resource input Model and Organizational learning Model and Therefore, the relationship is formally stated in its alternative form as follows:

H₃: *Resource management has positive significant effect on students' satisfaction in ISO 9001:2008 certified Universities in Kenya.*

Students' Satisfaction

In a University, students are the main customer of the organization (Hill, 1995; Sakthivel *et al.*, 2005; Zairi, 1995; IWA, 2007) therefore students' satisfaction should always be considered by the university when measuring the quality of education. Assessing students' satisfaction, achievement and absorption capacity are critical not only for the students and their institutions but also for the business industry who are potential recruiters of these students (El-Hilali, Al-Jaber, & Hussein, 2015).

According to Pitman (2014), quality of university education is therefore defined hierarchically as one that: (i) supplied students and the market with in-demand skills (fitness for purpose), (ii) retained and graduated a high proportion of students (efficiency); and (iii) generated positive student feedback (customer satisfaction).

The Empirical Review

Brucaj (2014) concluded that in order to be competitive, successful and achieve quality education in the market the management and leadership need to rethink their strategies and open to new leadership management strategies. Those strategies will contribute to enhance quality of education in the university. Therefore the role of leadership management is very important in designing and implementing the most appropriate strategies for their institutions to enhance quality of education and students' satisfaction.

A study by Sarbu, Ilie, Enache and Dumitriu (2009) reached the conclusion that, in order to have real quality in higher education, it is important to introduce a quality management system

and to constantly improve it, using the feedback from the satisfaction of the student and other interested parties, with the intention of attaining quality of education.

Magutu, Mbeche, Nyaoga, Nyamwange, Onger and Ombati (2010) studied quality management practices and academic services at the University of Nairobi and concluded that the University of Nairobi has applied quality management and public universities should abandon the status quo and be supportive of new ideas in order to respond to the ever-changing environment in higher education and enhancing quality of education and customer satisfaction (Kagumba & Gongera, 2013).

In their study on successful ISO 9001 implementation in Taiwan, Lin and Jang (2008) developed a conceptual framework that aimed at determining, among other hypotheses, whether management responsibility was positively related to operational performance. They found that management responsibility was not significantly related to operational performance. However, most findings from other studies have consistently emphasized the significant role of management responsibility in ISO 9001 implementation (Rayner & Porter, 1991; Lamprecht, 1991; Vloeberghs & Bellens, 1996). A study by Mekic and Goksu (2014) on implementation of ISO 9001:2008 at a private university in Bosnia and Herzegovina concluded that implementation of ISO 9001:2008 leads to increase of quality at institution level. According to the study by Lazibat, Sutic and Jurcevic (2009), measurement and analysis of teaching and learning has to be conducted to measure the teaching process capability, conformance of process output to standard or specified requirements, relevance of programs to beneficiaries' needs, students' performance and quality of graduates in term of achieving beneficiaries and recipients' satisfaction.

Research Gaps

Although Tam and Cheng (1996) argue that resource-input model of education service quality can be adopted by the administrators of universities to evaluate perceived service quality and students' satisfaction, there is a lack of empirical testing in the existing literature to support this contention which is a gap in the literature and will be further explored in the current research. The researcher agrees with Pratasavitskaya and Stensaker (2010) that the analysis of models and approaches of quality management at the University level has been rare address in the literature, which is considered by (Rosa, Sarrico & Amaral, 2012) as an unfortunate situation.

The existing literature has showed that research has been done on TQM practices in Kenya higher education, Factors affecting TQM Processes in State Corporation on Customer Satisfaction, and TQM practices in Kenyan secondary schools. Little or no empirical research has been conducted dealing with ISO 9001 Model and their effects on overall business performance and Quality of Services or Education in Kenya. In order to bridge this gap, an investigation into the effects of ISO 9001 Certification on students' satisfaction in Kenya in Universities is needed. Finally, the study may contribute to this knowledge field by examining the relationship between ISO 9001 and students' satisfaction in universities, which is rarely done previously in developing countries. Most of the studies in the field are focused on analyzing this relationship for American or European universities. Thus, a relevant contribution of this study would reveal new insights of a sample of Kenya universities for the empirical research.

RESEARCH METHODOLOGY

Research Design

This study adopted a cross-sectional survey research design to examine the effect of QMS

implementation based on ISO 9001 on students' satisfaction in the universities. Cross-sectional survey entails the collection of data on more than one case and at a single point in time in order to collect a large amount of quantifiable data in connection with two or more variables which are then examined to detect patterns of association (Azarian, 2011).

Population of the Study

According to CUE (2016) there are 70 universities in Kenya, 33 of which are public and 37 private that have been authorized by the Commission for University Education to offer university degrees either by being awarded charters, letters of interim authority, or letters of registration as at October, 2016. The target population was 70 universities which were either private or public universities ISO 9001: 2008 Certified in Kenya.

The population of study was all the ISO 9001: 2008 certified universities authorised to operate in Kenya as at October, 2016 which was 24 universities. The researcher was interested in finding out how the students are satisfied with the education service provided by the universities which were ISO 9001 certified based on the established Quality Management system.

Sample and Sampling Technique

The researcher obtained the list of accredited universities from the Commission of University Education website as the sampling frame then compile a list of ISO 9001 Certified and Non-ISO 9001 Certified Universities by getting the status from each university through the Quality Management representatives or University Administration. Target population of the ISO 9001 certified universities was 24 as at December 2016, hence no point to sample the population since this was a small population. The researcher conducted a census survey to collect data.

The research used non-probability sampling technique to select the respondents for the study. Ilker, Sulaiman, and Rukayya (2016) stated that non-probability sampling technique is useful when choosing sample when randomisation is impossible like when the population is very large and the resources, time and workforce is limited. The researcher used non-probability convenience sampling technique to select the potential students' respondents because of the proximity and accessibility of the respondents.

Research Instruments

Keeping in view the nature of the problem and population, questionnaires which contain structured questions with Likert-type scale was used to collect data. According to Sekaran and Bougie (2010) questionnaires can be administered personally, mailed to the respondents, or electronically distributed. Moreover, they have the advantages of covering a wide geographical area in the survey and the ease with which the respondents can complete the questionnaires in their homes at their own pace.

Data Collection Method

The study collected primary data from the respondents identified in the research. For this study to collect primary data, questionnaire was used. Each questionnaire was accompanied by a cover letter providing explanations and assurances that all individual responses were treated with confidentiality.

Data analysis and Presentation

In this research the response categories are inherently ordered. The dependent variable was discrete as well as ordinal. Under these circumstances, conventional regression analysis is not

appropriate (Greene, 2012). Instead, the ordered probit model is used to estimate models where the dependent variable associated with more than two outcomes is discrete and ordered (Long & Freese, 2014) and to address the requirement of ordinality as well as the requirement of discreteness, the researcher will use an ordered probit model in the study. O'Connell (2006) stated that ordered probit model fulfils both the requirements as it is suitable for producing probability estimates for outcomes that are discrete and ordinal

FINDINGS

Response rate

The study sought to find out the rate at which the targeted respondents participated in the study. This would therefore help to determine whether the study attained a reliable number of respondents to make conclusions and recommendations. The study had a sample of 384 respondents who were surveyed using a structured questionnaire from the 24 universities that were ISO 9001 certified as at December 2016 as shown in table 4.1. A response rate 70% (269 respondents) was achieved and the data used for the analysis. This therefore makes the study appropriate to make conclusions and recommendations since according to Creswell (2005) and Kingslay (2012) a response rate of 30-60% in a study is adequate for making conclusions and recommendations

Table 4.1 Response Rate

Response Rate	Frequency	Percentage
Responses	269	70
Non-Response	115	30
Total Sample size	384	100.0

Improvement management

In the study, improvement management was operationalised into: Customer Satisfaction measurement; Internal audit; Monitoring and measurement of product; Monitoring and measurement of processes; Analysis of data and Continual improvement measurement .A five - point scale was used to measure each of the sub-variable and the results were presented in tables.

Reliability Test

To test for the reliability of the research instrument on the variable continual improvement, a reliability test was carried out. The results are as presented on the table.

Item-total Statistics

Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Alpha if Item Deleted	
VAR00050	27.7727	39.1014	.5996	.8457
VAR00051	27.3485	40.4459	.5511	.8502
VAR00052	27.1212	38.7235	.7399	.8322
VAR00053	26.9091	41.1608	.5916	.8466
VAR00054	26.8182	42.8280	.4532	.8584
VAR00056	27.4091	39.5993	.6422	.8413
VAR00058	27.1818	39.6895	.5787	.8477
VAR00059	27.1212	39.7082	.6492	.8408
VAR00060	27.4091	40.8301	.5074	.8547

Reliability Coefficients

N of Items = 9

Alpha = 0.8612

On 'System Improvement' Likert question, the alpha value for the nine items is 0.8612, which is above alpha value of 0.7 threshold; hence the items have internal consistency retest was done as shown in the table below. The retest results indicated that the Alpha value increased to 0.8924 implying that the reliability became stronger after the retest.

Table 4.2: Cronbach's Alpha on Product/service realization

Variable	Test		Retest	
	Cronbach's Alpha	Number of items	Cronbach's Alpha	Number of Items
Product/Service Realisation	0.8612	9	0.8924	9

Validity Test

The extent to which an instrument measures what it purports to measure is the validity of the said research instrument. Validity requires that an instrument is able to measure the intended purpose as per the researcher's intentions. The consistency of the questions was checked with reference to experts and the supervisors and the questions were declared valid.

Descriptive Analysis

The study sought to determine the effect of QMS resource allocation on Students' satisfaction in ISO 9001 certified universities in Kenya. This was an attempt to find out the respondents' opinion on the statements on resource management and its impacts of satisfaction of the students in universities certified under ISO. The findings as presented in table 4.9 below indicates that on the first statement that there are sufficient human resources to support education services; 10.4% of the respondents said that they were very dissatisfied with the statement, 14% said that they were dissatisfied, 18.8% were uncertain, 41.4% were satisfied and 15.1% were very satisfied with the statement. On the second statement that the students have access to facilities and equipment, 9.1% of the respondents were very dissatisfied with

the statement, 11.5% were dissatisfied, 16.1% were uncertain, 39.8% of the respondents were satisfied and 23.4% of the total respondents were very satisfied with the statement. The third statement was that location and availability of buildings, playgrounds, libraries and labs are provided to students and on this, 6.8% of the total respondents said that they were very dissatisfied with the statement, 9.6% were dissatisfied, 14.6% were uncertain, 40.4% were satisfied and 28.6% were very satisfied.

Table 4.3: Level of Satisfaction on statements on Resource Management

Statement	Very dissatisfied	Dissatisfied	Uncertain	Satisfied	Very satisfied	Total
There are sufficient human resources to support education services	10.4	14.3	18.8	41.4	15.1	100.0
The students have access to facilities and equipment	9.1	11.5	16.1	39.8	23.4	100.0
Location and availability of buildings, playgrounds, libraries and labs are provided to students	6.8	9.6	14.6	40.4	28.6	100.0
Education environment conditions are conducive for education services	3.9	9.9	15.6	46.4	24.2	100.0
The university assess educational service environment for associated risks, security, safety and hygiene	6.8	9.1	18.0	45.8	20.3	100.0

The study also sought to find out the respondents' opinion on the statement that education environment conditions are conducive for education services. On this, 3.9% of the respondents said that they were very dissatisfied, 9.9% said that they were dissatisfied, 15.6% were uncertain, 46.4% indicated that they were satisfied and 24.2% said that they were very satisfied. The last statement on the questions was that the university assesses educational service environment for associated risks, security, safety and hygiene where 6.8% of the respondents were very dissatisfied with the statement, 9.1% were dissatisfied, 18.0 were uncertain, 45.8% were satisfied and 20.3% were very satisfied.

The findings of the study concur with an argument by Venkatraman (2007) who contended that one of the strategies to ensure effective total Quality management (TQM) is through effectively managing organizational resources and ensuring that every stakeholder may it be employee or customer are well catered for. According to Hutyra (2011) resources needed in a university such as educational materials and conducive working environment play an important role in making the customers (students) satisfied with the university. When the institution pays attention to the service delivery through provision of better resources as the ISO 9001:2008 states, the students feel more secure and become more satisfied.

Inferential Analysis of the Ordered Probit Model on Resource Management and Students' Satisfaction

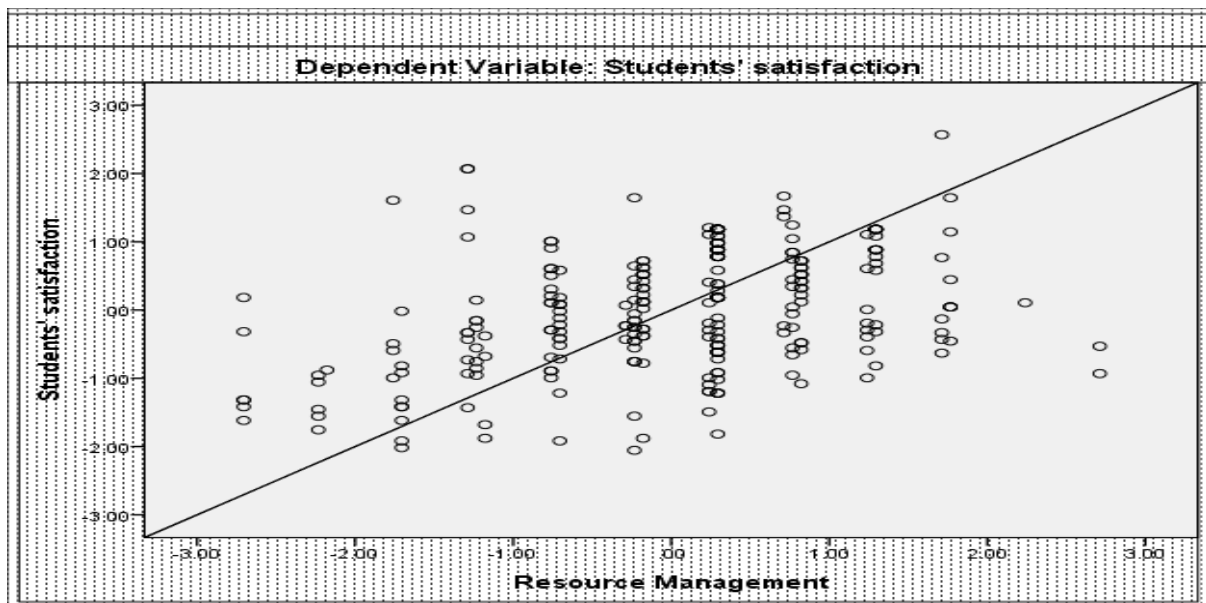
H_{A3}: QMS resource allocation had positive significant effect on students' satisfaction in ISO 9001 certified universities in Kenya.

To determine the level and the impact of resource management on students' satisfaction,

ordered Probit model was carried out. As the model output shown in table 4.10 below indicates, documentation of the resource management is significantly and positively related to students' satisfaction. The P-value is 0.000 which is less than 0.05 meaning the variables are positively related. The findings further show that resource management can explain up to 82% (0.82375) of the students' satisfaction. The findings compare with those by Shibru and Darshan (2011) whose model established that resource management had a p-value of 0.001 thus concluding that resource management was significantly related to customer satisfaction and firm performance. According to Cruz, da Souza and Melleiro (2010) resource management is one of the key factors that enhances satisfaction among the users or receivers of a product/service. Through provision of the required resources and enhancing the accessibility of the shared needs, the users have more feeling that their requirements are well taken care of thus become more satisfied. However, the findings does not concur with those of Kaingi (2012) who found that satisfaction of students did not contribute to the satisfaction of the students but only made them feel associated with the institutions.

Table 4.10: Estimation of the probit model for Resource Management and Student's Satisfaction

Satisfaction	Coef.	Std. Err.	Z	P>z	[95% Conf. Interval]
Resource Management	.9477518	.0632649	14.98	0.000	.8237548 1.071749
Number of obs	269				
Pseudo R²	0.1087				



CONCLUSION

The study concluded that leadership management through proper students' engagement and provision of proper human resources enhanced the satisfaction of the students. The study also concludes that resources provided by most of the ISO certified universities in Kenya are sufficient to satisfy the students. However, the study concluded that the universities have not effectively enhanced resource allocation and management strategy based on the fact that some students (respondents) still felt dissatisfied with the resource allocation strategies done by their respective universities thus signifying the absence of adequate resources.

RECOMMENDATIONS

The study recommended that the management of the ISO certified universities in Kenya should embrace effective resource proper resource management strategies such as allocation of the

resources equally and ensuring that the students' needs as far as the resources are concerned are met. The management of the universities should ensure that the human resources provided such as the lecturers teaching the students are well trained so as to provide the required quality of services.

RECOMMENDATIONS FOR FURTHER STUDY

The study aimed at establishing the role of quality management systems implementation on the students' satisfaction in ISO 9001:2008 certified universities in Kenya. The study therefore focused on the ISO certified universities only thus there is need for a similar study to be conducted focusing on the universities and other higher learning institutions that are not ISO 9001:2008 certified.

The study was limited to the main campuses of the ISO 9001:2008 certified universities. There is need for a comparative study between the levels of students' satisfaction among the ISO 9001:2008 certified universities and those not certified to ascertain whether certification by ISO 9001:2008 enhances the satisfaction or not.

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