Title	ISO 9000 maintenance measures : the case of a Malaysian local authority
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Type	Article
URL	This version is available at: http://usir.salford.ac.uk/38533/
Published Date	2016

ISO 9000 maintenance measures: The case of a Malaysian local authority

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Abstract

Although many studies pertaining ISO 9000 initiatives have been conducted, the topic of ISO 9000 maintenance has received little attention from researchers. This paper presents a detailed case study of the ISO 9000 maintenance measures within a Malaysian local authority. Semi-structured interviews were conducted with 15 interviewees. The findings revealed that six measures are undertaken in ISO 9000 maintenance; namely, control of documents, internal quality audit, data analysis and feedback, management review, corrective and preventative action, and training. The research findings also revealed that the ISO 9000 maintenance measures are effectively carried out at a Malaysian local authority in this study. Although adherence to work procedures and focus on customer satisfaction have been given priority, the ISO 9000 maintenance has progressed into a more advanced phase by making ISO 9000 a tool to deliver a high-quality service that results in organisational performance improvement. Continuous improvement initiatives have enabled ISO 9000 maintenance to move forward and reach its advanced stage. The findings derived from this research would facilitate managers to understand the measures needed for effective ISO 9000 maintenance. The main contribution of this study is that it is one of the first to explore ISO 9000 maintenance in a specific sector, that is local authority. Hence, the findings are significantly important in developing knowledge of ISO 9000 maintenance in the local authority sector.

Key Words: ISO 9000, maintenance, measures, Malaysia, local authority

1. Introduction

ISO 9000 is the most popular quality management system that is implemented widely across the world. In 2013, 1,129 ,446 ISO 9000 certificates had been issued globally (ISO, 2014). The ISO 9000: 2008 quality management system is more customer focused than previous versions and also less biased towards the manufacturing sector and thus more generic (Ismyrlis & Moschidis, 2015). The ISO 9000 family addresses various aspect of quality management and contains some of ISO's best known standards. The standards provides guidance and tools for companies and organisations who want to ensure that their products and services consistently meet customer's requirements, and that quality is consistently improved. Standards in the ISO 9000: 2008 family include (ISO, 2015):

ISO 9001: 2008 – sets out the requirements of a quality management system.
ISO 9000: 2005 – covers the basic concepts and language.
ISO 9004: 2009 – focuses on how to make a quality management system more efficient and effective ISO

19011: 2011 – sets out guidance on internal and external audits of quality management systems.

ISO 9001: 2008 sets out the criteria for a quality management system and is the only standard in the family that can be certified to. It can be used by any organisation, large or small, regardless of its field of activity. In fact ISO 9001: 2008 is implemented by over one million companies and organisations in over 170 countries (ISO, 2015).

There have been many previous studies conducted pertaining to ISO 9000 employment; however most of the studies focus on the implementation stage. Previous studies in regard to ISO 9000 implementation were conducted by many authors (Kunnanatt, 2007; Lin & Jang, 2008; Lee et al., 2009; Franceschini et al., 2010; Prajogo, 2011; Rodriguez-Cerrillo et al.,

2012; Chen & Cheng, 2012; Bevilacqua et al., 2013; Abdullah et al., 2013; Kafetzopoulos et al., 2013; Blessner, 2013; Wu & Jang, 2013 and Willar et al., 2015). However, previous study showed that as compared to the topic of ISO 9000 implementation, the topic of ISO 9000 maintenance has received little attention from researchers.

Although many organisation has implemented ISO 9000 and have been certified, a number of issues and problems still occur. For instance, based on a study at an engineering consultants in ISO 9000-based QMS implementation, Ng (2005) found that the actual benefits were generally lower than that expected by the clients. Mak (2011) found negative aspects to the ISO 9001 certification which include the high cost of implementation, lukewarm reception by staff, reduce effectiveness over time and that consistency of procedures did not equate to good or improving quality.

Ilkay & Aslan (2012) disclosed that a direct relation could not be found between ISO 9001 certification and performance. Feng et al. (2008) in their survey in Australia and New Zealand-based manufacturing and service companies found that ISO 9001 certification by itself does not lead to improvement in business performance. Meanwhile, based on study that uses data from 731 companies Martinez-Costa & Martinez-Lorente (2007) found that ISO 9001 certified companies did not improve their results, in fact their results have worsened. According to the authors, the reasons behind the findings are:

i.   The cost of implementation and maintenance of the standard is greater than the benefits that it produces.

ii. The benefits of implementation are low in companies that get the certificate only in response to external pressures, since they do not apply the standard thinking of a quality management system more in line with TQM but only with a view to getting the certificate at minimum cost.

iii.   Some of the companies that have applied the standard only for commercial reasons could be applying it only in a formal way and trying to deceive the auditors.

iv.   Some companies have applied the standard because their industrial customers have forced them to do it.

Certification of ISO 9001 cannot guarantee that the organisation will perform well. Whether ISO 9001 certification will help in improving organisational performance is influenced by several factors. In this regard, To et al. (2011) argued that simply by adopting and maintaining the ISO 9000 certificates is not enough. Organisations should consider ISO 9000 as a strategic management practice that can achieve superior organisational performance. The more resources and commitment an organisation devote to implement the principles of ISO 9000, the better performance it can achieve. Another author that is Lee et al. (2009) discovered that service firms with a high level of adoption in the principles ISO 9000 outperformed those with a relatively lower level of adoption, in both overall performance and behavioural response. Meanwhile, Jang & Lin (2008) argued that effective ISO 9000 implementation can improve operational performance, and the depth of implementation is positively correlated with operational performance.

As ISO 9001 is generic in nature, it is expected that the standard can be applied effectively in service sector. However, the implementation of ISO 9000 in the service sector is still faced with certain problems. For instance, Valls & Vergueiro (2006) highlighted the many barriers in ISO 9000 implementation in service organisations which include the lack of support from management, absence of human and technological resources for the implementation of all necessary processes, difficulty in implementing mechanisms of communication with users, and, excess of measurements and controls. Meanwhile, based on a quantitative study conducted by Abdullah et al. (2013) on the Malaysian local authority, it

was found that there are four categories of barriers emerged in ISO 9000 implementation namely organisational barriers, resources barriers, behavioural and cultural barriers, and, technical barriers.

Ab Wahid (2012) argued, with so much literature on ISO 9000 being written, it is quite surprising to find that not much is being focused on the maintenance of the ISO 9000 quality management system or the post-certification period. Kim et al. (2011) divided ISO 9000 employment into 3 stages; the conversion stage, the enhancement stage and the competitive priority stage. The enhancement stage is actually the ISO 9000 maintenance phase wherein its aim is to make the standard-oriented practices routine across organisations and improve organisational performance. In this stage, continuous improvement is given priority so that ISO 9000 employment is maintained effectively.

Literature indicated that only a few numbers of authors have vigorously discussed ISO 9000 maintenance (Basir, 2008; Ab Wahid & Corner, 2009; Ab Wahid et al. 2011; Ab Wahid, 2012 dan Mokhtar et al., 2013). Meanwhile, other scholars have touched ISO 9000 maintenance issues in cursory only (Casadesus & Karapetrovic, 2005; Magd, 2006; Alic & Rusjan, 2010; Kim et al., 2011; Bell & Omachonu, 2011 and Allur et al., 2014). As ISO 9000 maintenance matters is largely understudied, there is a need to conduct a study to find out the measures taken by members of the organisation in maintaining ISO 9001 certification.

This discussion shows that even when an organisation or firm has successfully obtained ISO 9001 certification, there are several issues that needs to be addressed, among them is that the benefits received were inadequate and the negative effects arising. Another issue is that of the organisations that have been certified with ISO 9001 but are unable perform well. Therefore, there is a need to examine what is done after organisations are successfully ISO 9001 certified. In other words there is a need to study on what has been done by organisations

in maintaining ISO 9001 certification. Studies need to be conducted to explore what measures are taken in order to maintain ISO 9001 certification, and to study how those measures are implemented. This matter needs to be researched since the effectiveness of ISO 9000 maintenance have a considerable impact in improving management efficiency, and subsequently improving organisational performance.

Lee et al. (2009) argued that despite the considerable number of ISO 9000 studies, the extent of these studies in general are focused on the manufacturing organisations. Literature review showed that the study pertaining to ISO 9000 employment and maintenance in the service sector is still lacking. Therefore, it is necessary to conduct a study on ISO 9000 employment and maintenance in the service sector. This study will focus on ISO 9000 maintenance in the service sector specifically in the local authority. There are studies on ISO 9000 adoption in local authority which were conducted by Singh & Mansou-Nahra (2006) & Abdullah et al., (2013) but both of these studies focuses on the ISO 9000 implementation and not ISO 9000 maintenance. Therefore, there is a need to study what measures were carried out in order to maintain ISO 9000 in local authority entities. There is also a need to discover how those activities or measures are delivered in order to effectively maintain ISO 9000. By comparing the ISO 9000 maintenance practice of this particular local authority entity with findings from past studies, it will shed some insight on the unique aspects of ISO 9000 maintenance in local authority. The aim of this paper is to study the ISO 9000 maintenance measures within a Malaysian local authority. The purpose of this paper is to answer the following research questions:

RQ1: What measures were carried out in order to maintain ISO 9000 within a Malaysian local authority?

RQ2:   How those measures are delivered in ISO 9000 maintenance within a Malaysian local authority?

2. Literature review

Hoyle (2005) defines maintenance as meaning the action of retaining something in a serviceable or proper condition. Ab Wahid (2012) argued maintaining the ISO 9000 means not only keeping the certification by complying with the requirements of the standard, but also embracing the principles and values that are embedded within. Therefore, the author has divided the meaning of ISO 9000 maintenance into two levels; i) maintenance referring to strictly following the requirements of the standard, and, ii) maintenance referring to the embedding of principles that underpin the ISO 9000 standard.

Previous authors have suggested several measures in order to maintain ISO 9000 effectively. Basir (2008) suggested that internal, surveillance audit, management review, continuous improvement as activities that needs to be carried out in ISO 9000 maintenance. Ab Wahid (2012) recommended that six measures needs to be delivered in ISO 9000 maintenance namely control of document, internal quality audit, data analysis and feedback, management review, training, and, corrective and preventative action. Corrective measures are crucial to CI initiatives, and without them ISO 9000 cannot be maintained (Sharif, 2005). Meanwhile, Ab Wahid (2012) suggested that to implement corrective and preventative action effectively, corrective and preventative action mechanisms must be used. Ab Wahid et al. (2011) found that some of the non-conformances that were found in their research indicating a lack of operational control were seen in the control of nonconforming product, control of production and service provision, monitoring and supervision, and ineffectiveness of measurement on some processes. Hence, the authors believed that training on skills,

competency, ISO 9000 and job specific knowledge would help towards reducing the non-conformances associated with operational control.

Another measure need to be carried out in ISO 9000 maintenance is training (Ab Wahid, 2012). Ab Wahid et al. (2011) suggested that most of the problems in ISO 9000 maintenance are due to a lack of awareness and training. The authors further suggested, to change attitudes, the people of the organisation need to be educated and trained on ISO 9000 to increase their understanding on the standard and its requirements. Kim et al. (2011) divided ISO 9000 employment into 3 stages, namely the conversion stage, the enhancement stage and the competitive priority stage. According to the authors, the enhancement stage is actually the maintenance stage in which the authors believed that the employees are content to attend training programmes and share their knowledge with colleagues and auditors.

Basir (2008) suggested continuous improvement as a crucial measures in ISO 9000 maintenance initiatives. However, Sharif (2005) argued that certified organisations had not been doing enough to carry out continuous improvement. One of the inputs needed for CI can be sought from data analysis and feedback. Regarding this, Ab Wahid (2012) explained that since the maintenance phase is about control and monitoring to ensure the quality system is running effectively, data about the process, system, and customers need to be collected and analysed. In her research at the subsidiary of Malaysia's major airline company, she found that both the management and employees are aware and recognised continuous improvement must be implemented to successfully sustain the quality system.

Next measure suggested for ISO 9000 maintenance is management review (Basir, 2008). Ab Wahid (2012) argued that, to maintain ISO 9000 more effectively, data on process and system performance, and feedback from customers must be analysed and discussed in the management review meeting in order to detect potential opportunities for continual

improvement and corrective and preventative actions. Wealleans (2005) underlined that management review is the time when the leaders of the organisation take an overall look at the quality system. Concurring with this, Wealleans (2005) suggested that the management review should be chaired by top management of the organisations and attended by the majority of the senior management team, including the quality system manager as well as departmental heads.

Basir (2008) and Ab Wahid (2012) recommended internal audit as another measure in ISO 9000 maintenance. In this regard, Wealleans (2005) suggested that most auditors need to be trained so that they are able to deliver auditing processes. This is echoed by Tricker (2005) who said that internal audit should be completed by trained personnel and if internal audits are conducted by qualified personnel, they are usually successful. Ab Wahid et al. (2011) in their study on ISO 9000 maintenance at two Malaysian service companies found that the managers have to undergo extensive training before they are qualified as internal auditors. The authors argued those auditors evidenced a high commitment to ISO 9000 maintenance and therefore they should be recognised and rewarded.

Finally, Wealleans (2005) suggested that surveillance audits had been conducted to renew and maintain ISO 9001 certification. Wealleans (2005) argued that the ISO 9001 certification is maintained by continuing to demonstrate to the certification body that the quality system continues to operate and incorporates appropriate improvements. He further suggested that, if the organisation is large, the surveillance audit may not cover everything, but should be arranged so that the entire quality system is covered over a period of time. Sharif (2005) concurs and argues that the certification body had helped the certified organisations to maintain the QMS in three Libyan public manufacturing organisations.

It is apparent that ISO 9000 maintenance emphasises on monitoring aspects. There are three ISO 9000 maintenance initiatives that can be associated with monitoring aspect namely control, internal audit and surveillance audit. Although all three initiatives are related, but there are clear differences between them. Control involves two aspects, namely, control of documents and control of records. This is a basic requirement in implementing and maintaining ISO 9001 certification. Documents need to be constantly monitored to ensure that only the latest is used in the organisation. Obsolete documents need to be disposed. Records need to be updated to ensure that only the right and up to date records are utilised in delivering the quality management system. In conclusion, the control initiatives involve only part of the whole monitoring aspect of the ISO 9000 maintenance.

Internal audit is a monitoring aspect that involves greater coverage, which monitors whether the maintenance of quality management system complies with the requirements of ISO 9001: 2008. It also aims to monitor the achievement of quality objectives and, to monitor the continuous improvement that has been implemented. Internal audit is performed by internal auditors. Internal audit is conducted as a preparation for the surveillance audit. Meanwhile surveillance audit is the monitoring aspect that is conducted by external certification body to assess whether the maintenance of quality management system meets the requirements of ISO 9001: 2008. It is also to monitor whether continuous improvement measures have been delivered. If only the auditors of the certification body are satisfied with the status and performance of the implementation of ISO 9000, is the ISO 9001 certification renewed.

It is interesting to note that the measures discussed in this part of literature are also an ISO 9001: 2008 requirements. However, most literatures in previous studies discussed these measures in the context of implementation stage of ISO 9000 employment. While in the literature of this study, measures are discussed in the context of the maintenance stage of ISO

9000 employment. Since the literature pertaining ISO 9000 maintenance is still very much lacking, therefore the literature developed in this study provide a significant contribution to the development of theory in regard to the topic of ISO 9000 maintenance.

3. Methodology

Robson (2011) pointed out that the case study strategy involves an in-depth analysis of an individual person, a group, a setting or an organisation. The present study employs a single case study as suggested by Yin (2014). The case study selected is Subang Jaya Municipal Council (SJMC) which is located in the state of Selangor, Malaysia.

Robson (2011) suggested that there are three types of interviews, namely fully structured interviews, semi-structured interviews and unstructured interviews. Easterby-Smith (2012) recommended that semi-structured interviewing is appropriate when:

i.   It is necessary to understand the constructs that the interviewee uses as a basis for her opinions and beliefs about a particular matter.

ii.   One aim of the interview is to develop an understanding of the respondent's 'world'.

iii.   The step-by-step logical situation is not clear.

iv.   The subject matter is highly confidential or commercially sensitive.

v.   the interviewee may be reluctant to be truthful about the issue other than confidentially in a one-to-one situation.

Bryman (2012) suggested that in this kind of interview, the emphasis must be on how the interviewee frames and understands the issues and events. As the aim of the interview is to understand the interviewee's view on the ISO 9000 maintenance measures, therefore, semi structured is apposite. In addition, as the subject matter is highly confidential, semi-

structured interviews have helped the author to gain rich information and the explanations needed. In addition, semi-structured interview type has been chosen as the main method for this study as its flexibility allows the author to modify the questions to understand the phenomenon investigated. Robson (2011) claimed that the order of questions can be modified based upon the interviewer's perception of what seems the most appropriate. This enables the authors to ask additional questions and further explanations in regard to some points of ISO 9000 maintenance measures to gain in-depth understanding.

Several weeks before the author started the fieldwork, one of the authors visited the sites of the case study organisation involved; mainly to introduce herself and her study. This was crucial for developing trust between the author and the targeted interviewees as suggested by Easterby-Smith (2012). Fifteen interviewees were interviewed in this study. The interviewees selected were top management, middle managers, the members of the ISO 9000 secretariat, the quality coordinators and internal auditors. Officers who did not hold any positions in the ISO 9000 programme were also selected as interviewees, since they had experience as auditees, that is, a person who has been audited by internal and external auditors. Some interviewees had multiple roles within the case study organisation, and, thus, they could offer opinions from various perspectives. For instance, one interviewee held a head of department post and had experience as an internal auditor. Therefore, she has vast and diverse experience pertaining to ISO 9000 maintenance at SJMC. Another interviewee worked in the Audit Department, so he had a good understanding concerning how the ISO 9000 programme relates to the overall perspective of the case study organisation performance.

The interviews took place between 1 June 2014 and 30 July 2014. All the interviews were conducted in the interviewees' offices. As all the interviewees consented the interviews to be recorded, the author chose to record the interviews. By using a digital recorder, the author was able to concentrate on the interview and only made some notes during and after

the interviews to get clarification on certain points. Most of the interviews took between one hour and 30 minutes, and two hours. During the interview sessions, the authors has asked additional questions and supplementary explanations in regard to certain points to gain in-depth understanding pertaining to ISO 9000 maintenance activities. The authors have also explained some questions and terms that caused confusion to the interviewees. As the interviews contained some technical terms, it was important to verify that the interviewees had a correct understanding before they could offer appropriate answers.

All the interviews were transcribed in which the researchers captured the main points and contents of the interviews. The contents of the transcription were placed in a matrix in accordance with the interview questions provided. The information was displayed in the form of a matrix to enable the researchers to identify the themes from the issues investigated, that is, the measures taken in maintaining ISO 9000 at SJMC.

During the interviews, the author had a chance to collect most of the data needed for the study, such as documents. All documents collected in this study were obtained through the website of the case study organisation. Yin (2014) argued that the most important use of documents is to corroborate and augment evidence from other sources. Documents help in verifying spellings and titles that were mentioned in interviews, providing specific details to corroborate information from other sources and making inferences from documents. In this research, the documents collected from the case study organisation were the:

i.   Monthly meeting minutes

ii.   Online services information

iii. Trainings information

Yin (2014) suggested that archival records are also relevant for many case studies. In this study, the history of case study organisations was collected from website in order to gain an understanding of the organisational background.

3.1 *Case study organisation*

SJMC was established through Malaysia's Local Government Act 1976, which is responsible for delivering services related to the environment, hygiene, planning approval, health and tax assessment. SJMC's vision is to become the leading local authority internationally, based upon the philosophy of Smart Urbanisation, Business City and Ideal Residence. SJMC was awarded ISO 9001: 1994 certification in 2000, at which time it encompassed 80 per cent of the procedures of the work activities involved. As of 2014, the programme continues to run smoothly wherein all the work activities at SJMC have been implemented based on the requirements of ISO 9001: 2008. As a municipal council, SJMC has a diverse set of customers, including community, businessmen and real estate developers. The majority of the residents within SJMC's administrated zone comprise highly educated and high income earners, who have high expectations of the quality of services delivered. Therefore, in this situation ISO 9000 is utilised as a tool to meet the demands of the people or customers.

In addition to ISO 9000, SJMC has also run other management programmes such as 5S and innovation programmes. Currently, SJMC has embarked on ISO/IEC 27001, which is an Information Security Management System (ISMS). SJMC has evidenced excellent achievement as it has won numerous awards, at both the national and international level (SJMC's website, 2014). SJMC's commitment to ISO 9000 and other systems make it a good choice for this study.

4. Findings and Discussion

The research findings showed that six measures had been carried out in ISO 9000 maintenance at SJMC. The details of the six measures are as follows:

4.1 *Control of documents*

The research findings from this study have shown that, to maintain ISO 9001 certification, document control, which was managed under the coordination of the Corporate Department, has been well implemented at SJMC. Each department at SJMC holds a copy of the documents or forms, and, at the same time, the Corporate Department also holds a copy. This was explained by the Deputy Director who was interviewed. She added that a workshop was conducted annually to review the documents that need to be removed, improved or simplified. Changes in these documents have been made on the advice of the appointed consultants. She further on said that many officers and employees are knowledgeable about ISO 9000 and this has helped the review of the documents and work procedures significantly. In this context she said as follows:

> As SJMC has been certified with ISO 9000 for more than 10 years, many of the officers and employees were becoming increasingly expert in implementing and maintaining ISO 9001 certification, which directly facilitated the review of the documents and work procedures at SJMC.

Supporting the Deputy Director's explanation, several officers who were interviewed also noted that the officers and employees at SJMC were highly involved in the work of reviewing and updating the work procedures, documents and forms with the assistance of the Corporate Department.

Meanwhile, two of the interviewees explained that SJMC had also established an online database, which provides a variety of documents and forms required for the completion of jobs and tasks. According to the Quality Manager, the existence of the database had helped everybody to obtain documents and forms quickly, which resulted in an improvement in the work productivity of employees. Another interviewee, who is a Treasurer and senior officer of the Finance Department at SJMC, said that, although many forms can be submitted by customers through the online system, the original form of the document or a hardcopy form is still essential for the management of financial matters. In this event she commented as follows:

> Our customers can submit financial claims through the online system, but after that they must also submit the original and hardcopy documents needed to us….. the reason for this is we want to verify that all the documents sent to us are real. Another reason is to prevent customers' dishonesty.

Ab Wahid et al. (2011) revealed that, during ISO 9000 maintenance, people are more positive about the quality system and their morale is also improved, which results in higher involvement and participation in maintaining the ISO 9000. The author further revealed that people had also gained awareness of and become more knowledgeable about ISO 9000. The findings in this study are similar to those of Ab Wahid et al. (2011) in that the officers and employees at SJMC are considered to be well-versed in ISO 9000 and participated extensively in reviewing the work procedures and documents.

4.2 *Internal Quality Audit*

The research findings from this study indicated that the internal audit at SJMC was carried out twice a year, in the middle and the end of the year. This was noted by the Deputy Director. The Deputy Director also said that internal auditors had been appointed by the top

management and they have received adequate training. Therefore, it is not surprising that there was a view that the internal auditors were performing the auditing work efficiently and effectively. The Deputy Director also stated that a few steps were undertaken to monitor audit competency among auditors. She commented on this aspect as follows:

> All the internal auditors had undergone rigorous screening and evaluation processes annually to check their auditing competency. In addition, the auditor is also required to sit the audit exam each year. If they fail the examination, they are not allowed to carry out audit work the following year.

One of the interviewees in this study explained that she had been an auditor at SJMC for 11 years. She recounted that she had to undergo an evaluation session that was conducted by the consultant in order to assess whether she was still enthusiastic and keen to be an internal auditor. According to her, it is important to ensure that the internal auditors at SJMC have a strong interest in the job, as the audit work requires a high commitment. The interviewee explained that she was satisfied with her duties as an internal auditor since she considered it as a learning process, in that she could learn how other departments implemented ISO 9000 and then apply it in her own department. She argued that this process adds value to the maintenance of ISO 9000 at large. The research findings indicated that important steps were undertaken to monitor the motivation of the internal auditors as this could affect the effectiveness of the audit work at SJMC. The research findings have close affinity with those of Kim et al. (2011) who viewed that during the enhancement stage of ISO 9000 employment, the audit was an excellent opportunity to identify weaknesses of managers and employees and areas for improvement.

The research findings also showed that the internal audit was conducted in a formal and professional manner. Audit notification was announced before audit works begun. This was revealed by one of the interviewees as he said as follows:

Usually, everybody was notified in advance of the date that the audit was to be carried out, so that they could make adequate preparations. The job processes were carefully and properly conducted as they would be checked by the auditors.

Another officer stressed that the internal audit was carried out in earnest in preparation for the external audit conducted by the Standard and Industrial Research Institute of Malaysia (SIRIM). ISO 9000 training was held periodically to familiarise employees with ISO 9000 and prepare them for the internal audit. Meanwhile, the Quality Manager from the Corporate Department noted that each department at SJMC has a Quality Coordinator who is assigned to coordinate quality programmes at the departmental level. The coordinator should submit a monthly report on ISO 9000 maintenance matters to the Corporate Department. With the assistance of the Quality Coordinator, the ISO 9000 maintenance is always monitored, which, ultimately facilitates the audit work later.

4.3 *Data analysis and feedback*

The interviewees revealed that, if there were any comments on ISO 9000 maintenance during the audit, the matter would be taken seriously. According to interviewees, among the comments that were recorded are about customers or public behaviour and expectations, that the categories of customers are many and varied, the excessive work procedures and non-compliance with work procedures. The interviewees further said that after completion of the internal audit, technical discussions are conducted to discuss the findings obtained during the audit. The technical discussions are conducted by following the clear guidelines provided and any findings from the audit, both Non-Compliance Report (NCR) and Opportunity For Improvement (OFI) cases are thoroughly discussed and resolved. Other matters discussed were the necessary improvement measures to ensure effective ISO 9000 maintenance. These findings indicate that continual improvement was well conducted in maintaining ISO 9000.

The Treasurer from the Financial Department who was interviewed said that she had received input from the SJMC top management to improve financial management. This was due to the action of the Selangor State Government, which decided that the financial report should be completed within a shorter period of 12 days. Inasmuch as the period of time assigned for the completion of the financial report at SJMC was 14 days, the Financial Department held discussions with the SJMC top management to find a way to achieve the new deadline set by the State Government. The work processes were reviewed and restructured until, finally, the target to complete the financial reports within 12 days was reached. In this respect, one interviewee explained that the top management was very strict regarding the period of time for the completion of any task or job. The interviewee remarked on this issue as follows:

> The top management had always emphasised that the period of time assigned for any task completion must be shortened, ……….and not made longer to maintain the productivity and quality of work at SJMC.

The research also discovered that the commitment of top management to the quality of work at SJMC is shown in the SJMC meeting minutes. The SJMC meeting minutes (2014a) disclosed that the President of SJMC insists that the 5-Star Rating Award given to SJMC had made it the most outstanding local authority in Malaysia. He believed that this has opened up a real challenge to SJMC to ensure that the quality of service delivery is at an excellent level. Thus, he vowed that SJMC was determined to continue to escalate its efforts to deliver its services efficiently and effectively, as well as strive for innovation and high performance. These findings have shown that the ISO 9000 initiative is utilised to improve the work processes and subsequently improve quality of service at SJMC. These findings are in line with Tanco et al. (2012) who argue that the quality movement is a philosophy that

emphasises long-term goals and the participation of operators not only in production work, but also in improvement and development activities.

It was revealed from the interviews that the quality of work is essential to ensure customer satisfaction. In this regard, one interviewee explained that customer surveys were regularly administered by the Corporate Department to assess customer feedback concerning the services provided by SJMC. In addition, consumer complaints can also be made easily through the online system called *'Irezponz'*. An open day was also held for two days with the aim being to introduce and inform the people about SJMC's Strategic Planning and Local Planning. It also aimed to gather people's input towards both types of planning. These efforts were undertaken by SJMC's management and show its commitment to obtain customer feedback.

4.4 *Management Review*

The research findings showed that the management review meeting was held at the end of the year, after the completion of the external audit delivered by SIRIM. One of the matters discussed during management review meetings pertains to the achievement of quality objectives. It was suggested that quality objectives that had been achieved for three consecutive years should be set to higher quality objectives, while those that had not been achieved would be discussed to find a way to resolve the issue.

It was also discovered from interviews that in management review meetings, the top management shown a high concern for continuous improvement and the effectiveness of the maintenance of ISO 9000. ISO 9000 is considered to be a management tool to meet the customer's demands as well as a quality programme that helps the top management at SJMC to achieve excellence in management. SJMC's top management has always encouraged its officers and employees to work hard in order to maintain a high quality of work. This is in

line with the achievement of SJMC, which won the Prime Minister's Innovation Award in 2010 and, this year, was awarded a 5-Star Rating, which is the highest acclamation for Malaysia's rating system of the public sector. The awards have prompted customers to have higher expectations of SJMC's service quality and, accordingly, employees must maintain a high quality of work so that the aim to meet customer demand can be achieved. The research findings in this study correspond with the previous study carried out by Kim et al. (2011) who found that ISO 9000 maintenance had been made a tool to leverage the organisation's competitiveness. The findings can also be linked with the findings from the study of Mangiarotti & Riillo (2014) who found that the employment of ISO 9000 could foster innovation.

These research findings also showed that SJMC top management has integrated the quality management system goals with strategic planning to be the outstanding local authority in Malaysia. From the present study, it is shown that SJMC top management have widely explained the strategic planning to all officers and employees. Hence, when the officers and employees at SJMC are able to see how the ISO 9000 initiatives support the effort to achieve excellence in management, their motivation to cooperate becomes more visible. Mokhtar et al. (2013) argued that a linkage between the strategic thrust and the quality management system initiatives is helpful in maintaining ISO 9000. The reason for this is that, when people are able to see the way the quality management system facilitates the achievement of organisational strategic planning, their motivation to be involved in ISO 9000 maintenance increases.

Meanwhile, one of the interviewees, who is also a senior auditor at SJMC, explained that in management review meetings, each head of department is given the chance get an explanation of the audit findings. The interviewee explained this matter as follows:

The opportunity is given to each head of department to obtain clarification of the audit findings in their respective departments…….. this is because there were situations in which some heads of departments were reluctant when the auditors found NCR and OFI cases in their departments. The auditor then presents their explanations and justifications in respect of the NCR or OFI cases given to certain departments. After a thorough discussion, the head of department always admits to the NCR and OFI cases given,…… following which a decision concerning the necessary steps to tackle the cases is made.

The findings from this study correspond with Nwabueze (2011) who found that, for TQM implementation to succeed, the leader involved must pose critical leadership traits like being a good listener.

It can be concluded that the management review is carried out effectively in maintaining ISO 9000 certification at SJMC. These findings strengthen the findings of Mokhtar et al. (2013) who revealed that the senior management commitment to providing support and resources had played a significant role in successfully sustaining ISO 9000 maintenance.

4.5 *Corrective and Preventative Action*

The Deputy Director stated that any findings of OFI or NCR cases during the internal audit and external audit were given serious attention. In regard to this, some interviewees acknowledged that the OFI cases could be solved immediately, while the NCR cases take some time to correct. Meanwhile, the Quality Manager thinks positively about NCR cases as she remarked as follows:

Since SJMC received many development and service application from customers, it is acceptable if NCR cases were found during the internal audit; however, I always had a positive view of the NCR cases as they helped reduce the NCR cases during the external audit.

In the present study, a spirit of teamwork among the workforce was apparent in correcting NCR cases. This finding can be traced from the explanation from one of the interviewees as she said:

I had handled one NCR case that involved several departments……..each department had undertaken their own corrective action, after which all the particulars involved were recorded in their respective department's files. All of the files were then submitted to the external auditors who reviewed them to ensure that all the necessary corrections had been completed. I strongly believed that this situation proves that the teamwork culture was practiced in ISO 9000 maintenance at SJMC…….. in addition, a blame culture was not shown, instead, the employees worked together to address the NCR and OFI cases.

These findings support Srivastav (2010) who found that ISO 9000 promotes inter-role and inter-department cooperation through identification of the interdependencies involved. Meanwhile one of the auditors revealed that, during the audit closing session, the auditors had provided a detailed description of the NCR cases reported. According to her, NCR cases were given due to several reasons which she explained as follows:

The NCR cases were usually given because the work done did not meet the stipulated time frame. Another reason for NCR cases was attributed to the work procedures not being met, resulting in failure to provide the best service to customers………..for example, the failure to issue an approval letter to the applicant applying for project approval from SJMC. The auditor also said that OFI cases were given due to non-compliance with work procedures, but did not thwart the service delivery to customers; however if the same OFI case is repeated, then the case will turn into a NCR case.

The auditor believes that NCR cases have a positive impact because they help to detect loopholes in the implementation of the work procedures at SJMC.

In conclusion, the corrective actions carried out had had a positive impact on the improvement of ISO 9000 maintenance. The NCR and OFI cases functioned as a mechanism for checking and monitoring the service delivery promises to customers, as enshrined in the customer charter and quality objectives of SJMC. The findings from this study strengthen the discoveries of Ab Wahid & Corner (2009) who found that consistency in procedures is one of the critical factors in ISO 9000 maintenance. Inconsistencies in work procedures triggered weaknesses in the service quality delivered to customers which, eventually, jeopardised the ISO 9000 maintenance initiatives. Therefore, all the works undertaken must correspond to the work procedures established so that the quality of services to customers can be assured.

Psomas (2013) found that service companies have prevented nonconformities to a high extent in implementing and maintaining ISO 9001 certifications. In regard to preventative action, many of the interviewees agreed that everybody was constantly reminded of the importance of compliance with the work procedures provided. They also needed to comply with the deadline of any task given. In addition, the employees were also always reminded to perform their job effectively so that customer expectations could be met.

4.6 *Training*

Assarlind & Gremyr (2014) said that training of employees is one of the critical factors for quality management initiatives. The research findings indicated that a lot of training and workshops relating to ISO 9000 were conducted at SJMC. The Deputy Director stated that training and workshops relating to ISO 9000 maintenance were held continuously at SJMC and that the scope included the aspects of general management, motivation and leadership. It was found that training on ISO 9000 was always held in-house to enable it to be attended by as many of the staff and officers of SJMC as possible.

The Treasurer said that she had attended several accounting and financial management courses and training that were delivered by external firms. The training had enhanced her knowledge and competency in managing the financial affairs of SJMC. In this respect she said as follows:

I have attended accounting and financial management training several times which were conducted by external firms. I treasured all the training since my knowledge and competency pertaining to financial matters were improved….and I can do my job better.

Meanwhile, the officer from the Development Department explained that she had attended an urban planning course. She added that the training conducted covered not only management aspects, but also technical aspects. In this respect she commented as follows:

I have attended training, which covers management and technical training ….the technical knowledge and skills that I earn are very important….since I am working in the Development Department which very much involves technical works…..

These findings can be linked to the suggestions from Ab Wahid et al. (2011) who pointed out that in ISO 9000 maintenance initiatives, employees should be educated and trained on the core knowledge of their job, skills and competency.

Two of the interviewees revealed that the current training emphasised imparting knowledge and skills pertaining to document amendment. Meanwhile, the Quality Manager explained that SJMC had visited other organisations that demonstrate excellence in management, such as the Customs Department and the Municipal Council of Johor Bahru. The management excellence of these organisations serves as a benchmark to SJMC in its endeavour to further improve its management and performance. The SJMC officers were also given the opportunity to attend short management courses abroad.

In brief, it can be concluded that many types of training have been conducted in relation to ISO 9000 maintenance at SJMC. The research findings revealed that various training programmes were conducted to ensure that the management and employees possess the knowledge and competency required for their job. Competency is an essential requirement to ensure that all parties are able to carry on their job effectively so that the quality of their work can be upheld. These findings are consistent with the study of Srivastav (2010) who found that ISO 9000 promotes continuous training of employees to maintain the required level of competence for effective role performance.

5. Conclusion and limitations

The aim of this paper is to study the ISO 9000 maintenance measures taken within a Malaysian local authority. The research findings revealed that six measures are undertaken in ISO 9000 maintenance; namely, control of document, internal quality audit, data analysis and feedback, management review, corrective and preventative action, and training. The research findings also revealed that the ISO 9000 maintenance measures are effectively carried out at a Malaysian local authority.

In conclusion, ISO 9000 maintenance at SJMC emphasises on an improvement in work procedures. Although adherence to work procedures and the focus on customer satisfaction is given priority, the ISO 9000 maintenance has progressed into a more advanced phase, that is, by making ISO 9000 as a tool to deliver high-quality services that has resulted in organisational performance improvement. Having received numerous accolades and awards, the management, officers and employees of SJMC are becoming more confident in utilising the ISO 9000 programme as a tool to embark on innovation initiatives. The CI initiatives that have been consistently implemented have enabled ISO 9000 maintenance to constantly move

forward and reach an advanced stage. With the top management commitment and the involvement of officers and employees, ISO 9000 is effectively maintained and has yielded great results.

Previous studies mainly focuses on the implementation of ISO 9000, and ISO 9000 maintenance topics have received less attention. Thus, this study contributes significantly to the development of knowledge as it adds to the literature on ISO 9000 maintenance, which is still very much lacking. It cannot be denied that ISO 9000 maintenance measures that are discussed in this study are also an ISO 9001: 2008 requirements. However, most previous studies discussed these measures in the context of implementation stage of ISO 9000 employment. While in this study, these measures are discussed in the context of the maintenance stage of ISO 9000 employment. Six measures found in this study were carried out in the spirit of ISO 9000 maintenance where it emphasises on the ripeness of implementation and continuous improvement in bringing the case study organisation in achieving excellence and innovation in the area of management. Previous studies on ISO 9000 maintenance were conducted mainly in the manufacturing and industrial sector. Therefore, this study is significant because it was carried out at a public agency, that is, a local authority entity, a sector that has yet to be explored. Many past studies on ISO 9000 and quality programmes used the quantitative method, whereas this study uses a qualitative method so that the details of the phenomenon of ISO 9000 maintenance at certified organisations could be explored.

This study involves only one case study, therefore generalisation is limited to that particular case only, and generalisation to the theory. Thus, future studies should include several case studies so that generalisation can be made to more case studies. As this study focuses on ISO 9000 maintenance at the local authority, future research should cover other sectors that are increasingly implementing ISO 9000, but have been neglected by previous

researchers, for instance, ISO 9000 maintenance in higher education institutions. Since this study only focuses on the scope of the ISO 9000 maintenance measures, future research could explore another scope of equal importance, that is the impact of human factors on ISO 9000 maintenance.

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