The Level of Effectiveness of ISO 9001:2008 Implementation to the Quality Management System of the National Research Council of the Philippines
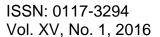
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Abstract

Quality Management System (QMS) controls the mechanisms that develop and deliver products and services to customers. The International Organization for Standardization (ISO) is composed of representatives from national standard bodies that produce world-wide industrial and commercial standards called the ISO standards. QMS based on the ISO 9001 series is a recognized approach to meet quality assurance certification requirements in both the design and business sectors of the industry. The NRCP belongs to the Department of Science and Technology (DOST) that is mandated to promote and support basic research in the Philippines. Hence, the NRCP adopted the ISO 9001:2008 for its Quality Management System on May 24, 2009. This study assessed the level of effectiveness of ISO 9001:2008 implementation to the QMS of the NRCP. The level of effectiveness of ISO 9001:2008 implementation was examined in terms of delivery of services, employees' performance and QMS improvements. Results show positive confirmation of the respondents on the effectiveness of NRCP's ISO 9001:2008 for the enhancement of its quality management system. The implementation provided the NRCP with quality delivery of services, improvement of employees' performance, and continuous improvement of NRCP's quality management system. It was in the employees' performance that the impacts of ISO 9001:2008 were most felt by the respondents, followed by the delivery of services, and the least felt was in the QMS improvement. The test for significant differences shows no significant differences in all of the three areas of concern. It further reveals that NRCP is compliant to the standards of ISO 9001:2008. The effectiveness of the implementation leads to the enhancement of its quality management system which gives them other benefits like having a Performance-Based Bonus (PBB), higher trust from stakeholders, and better customer satisfaction ratings.

Keywords: ISO 9001:2008, Quality Management System, Level of Effectiveness

Introduction

The mission of any organization whether private or public, for profit or non-profit is represented in providing quality products and services to its targets customers in a manner that fulfils its strategic objectives. Studies claimed that quality programs such as ISO 9001 improve both the management's practices and production processes, and that these improvements translate into increased sales and employment (Wahlman, 2004, p. 916). As a response to growing demands to boost competitiveness of the country, the Philippine government enacted the Executive Order No. 605 in 2006 to institutionalize the government's quality management program. The policy issuance mandated all government agencies to adopt ISO 9001:2000 standards (Bureau of Product Standards, 2010, p. 10).
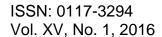
The NRCP adopted the ISO 9001:2008 implementation for its Quality Management System (QMS) on May 24, 2009. It has been a consistent ISO 9001:2008 certified since its first implementation up to the present. It has a yearly renewal of certification (www.nrcp.dost. gov.ph). However, just like other government agencies that are ISO 9001:2008 certified, NRCP is not fully aware about the effectiveness of the implementation to its QMS.

Significance of the Study

The study fits the government's urge for all government agencies and government owned and controlled corporations (GOCCs) to establish an ISO-aligned quality management system. The results of this study helped identify the level of effectiveness of ISO 9001:2008 implementation of NRCP to the enhancement of its quality management system. It is the researcher's belief that invaluable benefits to NRCP management and to other business institutions will emerge by streamlining the system of quality management, thus, ensuring quality services and ultimately the attainment of institutional objectives. This study also adds to the existing knowledge with regards to the usefulness of ISO9001:2008 implementation and to take advantage of its full potential. Findings can serve as basis on how ISO 9001: 2008 can be used as an enhancement tool on government operations. Results help identify the issues and challenges encountered in implementing the ISO 9001:2008. Future researchers may also find the results of this study useful since they could be used as references for future case studies and other related researches.

Methodology

The study was conducted using the descriptive research design, utilizing survey questionnaire, the purpose of which is to determine the demographic profile of the participants and the level of effectiveness of ISO 9001:2008 implementation in terms of the delivery of service, employees' performance and the Quality Management System. The respondents were composed of its employees only. The total number of NRCP's employees is 40 which comprise 36 regulars, 3 contractual, and 1 job order employee.

These employees are among the three organizational divisions of the NRCP, namely: the Research Development and Management Division (RDMD), the Research Information and Dissemination Division (RIDD) and the Finance and Administrative Division (FAD). They have their respective roles in the implementation of the ISO 9001:2008 to NRCP's QMS.

Statistical Treatment of Data

Data gathered were recorded, tabulated, analyzed, and carefully interpreted. Frequency distribution was used to represent groups' responses. The frequencies were translated to percentages to indicate the number per hundred. The responses were analyzed through the Weighted Mean. In order to get the significant difference between groups, the Mann-Whitney U standardized test was used.

The values obtained were interpreted using the following scales.

Interval		Interpretation
4.50	–	5.00 Strongly agree
3.50	–	4.49 Agree
2.50	–	3.49 Not sure
1.50	–	2.49 Disagree
1.00	–	1.49 Strongly disagree

Data were then summarized and tabulated using descriptive statistics in order to identify the frequent response to each item which would be the numerical value assigned to that response. Mean scores were then ranked. After ranking, the Composite Mean Score was analyzed.

Results

Results show positive confirmation of the respondents on the impact of ISO 9001:2008 implementation of the NRCP to the enhancement of its quality management system. They further illustrated that public offices like the NRCP, should adopt a quality management strategy that will aid them to function effectively and to enhance customer satisfaction by meeting customer requirements.

Profile of the Respondents

1. On age, most of the respondents belong to the 46 to 55 years old bracket with a frequency score of 12 or 30 percent of the total population. Next is the age bracket 56 and above which is composed of 9 people, followed by 26 to 35 age bracket which has 8 people. Fourth is the age bracket 18 to 25 which is composed of 5 people, and the group that got the lowest frequency belongs to 36 to 45 years old bracket, which is composed of 5 people only.

2. On gender, 21 of the respondents are females and 19 are males.

3. On educational attainment, 50 percent of the respondents have bachelor's degrees, 25 percent have master's degrees, 22 percent have a certificate or diploma and only 2.5 percent have a doctoral degree.

4. On the number of years in service at NRCP, 40 percent of the respondents are above 10 years. Thirty (30) percent are with 1 to 3 years of service, 17.5 percent are with 4 to 6 years of service and 12.5 percent of the respondents are with 7 to 10 years in service.

Impact of ISO 9001:2008 Implementation

Table 1. Summary of Composite Mean Scores, Interpretations and Rankings

Areas of Concern	Weighted Mean	Interpretation	Rank
Delivery of Services	3.55	Strongly Agree	2
Employees' Performance	3.56	Strongly Agree	1
QMS	3.48	Agree	3
Average	3.53	Agree	

Table 1 summarizes the composite mean scores, interpretations and rankings of the three areas of concerns. It was the Employees' Performance that got the highest rank among the three, followed by the Delivery of Services, and the lowest in rank is the QMS which got a mean score of 3.48. The overall composite mean score was 3.53 which is interpreted as Strongly Agree. This could mean that it was in the employees' performance that the effectiveness of ISO 9001:2008 implementation was greatly felt by the respondents, while it was in the QMS improvement that it was felt the least.

Test for Significant Difference

Table 2. Summary of Significant Difference Test

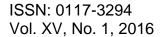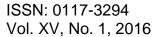| According to Age	p-value	Decision
Delivery of Services	.09	Accept
Employees' Performance	.23	Accept
QMS Improvements	.13	Accept
According to Gender		
Delivery of Services	.41	Accept
Employees' Performance	.73	Accept
QMS Improvements	.35	Accept
According to Educational Attainment		
Delivery of Services	.38	Accept
Employees' Performance	.18	Accept
QMS Improvements	.27	Accept
According to Number of Years in Service		
Delivery of Services	.18	Accept
Employees' Performance	.23	Accept
QMS Improvements	.10	Accept

Table 2 shows the summary of all the significant difference test results using the Mann-Whitney U Test. All of the results have p-values that are greater than 0.05 indicating that there are no significant differences in the responses of the respondent groups.

Issues and Challenges Observed by the Respondents in the Implementation of ISO 9001:2008:

1. Disagreements by top managers whereby some are for implementation while others are against the implementation.

2. Not all division chiefs are supportive of the QMS. Not enough commitment.

3. ISO implementation in this office is not being taken seriously.

4. The focus on ISO comes only when audit surveillance is near. Responsible personnel on NRCP QMS did not consistently perform their duties/functions properly all throughout the year.

5. Processes in internal audit are not properly done.

6. Employees are not properly guided on the dos and don'ts of ISO.

7. Though the ISO aim for efficient delivery of services, it is impractical to apply it because it only delays the smooth process of work. Instead of making a "short-cut" in the processing of papers, one has to do them one at a time, or one step has to be finished first before going to the next step which could be done altogether to speed up the process.

8. There is resistance, pessimism and "backslide" or falling to sustain efforts.

9. No focus group is assigned to evaluate the impact of ISO. Staffs only participate when surveillance is done by the 3rd party. As a result, passing the audit activity is not appreciated much as not too much effort is given.

10. Instead of simplifying work, ISO complicates matters making people more counter – productive. Further, certification does not come cheap.

11. There is no formal training/orientation conducted for the proper use of the various tools and instruments which are necessary for performance evaluation.

12. Audit observations are sometimes disregarded.

13. Policies tend to change whenever there is change in leadership, which can be considered as a frequent event happening in the council.

14. Resistance of employees to lack of inadequate information on the process, which is a requirement among others.

Here are the benefits of the ISO 9001:2008 Implementation:

1. Being a certified ISO 9001:2008 is a requirement to get benefits like the Performance- Based Bonus (PBB).

2. It improves the operations and processes.

3. It enhances consciousness of quality management system.

4. It results to better customer satisfaction rating.

5. There is higher trust from stakeholders.

6. Being an ISO certified entity is purportedly an assurance of its commitment to quality service.

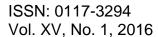7. There is orderliness in keeping records, forms, etc. as well as easy retrieval of such records.

Discussion

Based on the results, NRCP believed that ISO 9001:2008 is already firmly established as the globally implemented standard for providing assurance about the ability to satisfy quality requirements and to enhance customer satisfaction in supplier – customer relationship. However, complying and earning certification from certifying bodies and trainings provider were not that easy. But the top management through the support of the employees, NRCP was able to establish a set of standards for their quality management system and operational system that is recognized and accepted globally.

According to NRCP's Quality Management Representative (QMR) Mr. Geraldo S. Petilla, ISO implementation is important in an organization because it had provided their organization a systematized quality management system that is compliant with the stated standards of the organization aligned with its mission, vision and objectives. The documentation of their processes had brought NRCP to become more transparent to their customers. Likewise, it also strengthened their frontline services delivery and exhibited compliance with the Anti-Red tape Act.

Respondents strongly agree that the implementation of ISO 9001:2008 to the QMS of NRCP gave positive contributions to the areas of delivery of services. These shows that the implementation helps strengthened the positive communication within the organization and the customers. It had further contributed in meeting the requirements of the customers and prevented employees from committing errors that affect timeliness of service delivery. These coincides to the aim of ISO 9001 standard which is to "provide guidance and tools for companies and organizations who want to ensure that their products and services consistently meet customer's requirements, and that quality is consistently improved" (ISO, 2014c, para. 1).

Being an ISO 9001:2008 certified agency does not only improve the organization's performance but also the employees' performance. It was clearly observed that it is in the employees' performance that the impacts of ISO 9001:2008 implementation were greatly felt by the respondents. Results suggest that employees become more productive, efficient, more motivated in work, and more responsible. It also increases their morale and enhances their "quality conscious" and "right first" attitude. This performance of the
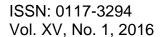
employees is one of the indicators for effective implementation of quality management system. Motivated employees have been identified as essential factor for the success of quality management programs (Reed et. al, 1996, p. 173-176). Empowered and self-managing employees are more productive and efficient in delivering performance (Harvey et al., 1992, p. 491). Employee empowerment attributed to better human resource management (Jai and Satit, 2005, pp. 1-6), which is an essential requirement for the successful implementation of quality management programs.

Some indicators on the area of QMS improvements where the respondents' answers were "Not sure" were also identified. The indicators, "reduces cost of operation", "reduces waste", 'save time and money" got the lowest weighted mean scores. This is because implementation of ISO 9001:2008 can be costly and requires a lot of time during the first few years of implementation. An empirical study by Corbett et. al. (2004), affirms that being an ISO 9001:2008 certified company entails expenditure of huge amount of time and money during the certification process. Certification does not end also with the final implementation of the initial certification. It must be maintained throughout the life of the organization. The study also revealed that after three years of certification, firms displayed strongly significant performance.

According to the study of Nichols (2012), it was concluded that ISO 9001:2008 implementation have significant effects on improving business performance and had great impact on sales and profitability. Likewise, the study found a direct correlation with firm's return on assets. The certified firms improved their performance while the non-certified firms experienced substantial deterioration. Another interesting finding is that the certified firms have reduced stock returns volatility and it appeared that ISO 9001:2008 certification also seems to reduce risk.

Results reveal that most of the issues and challenges encountered in the implementation are on insufficient support and commitment from the top management and the resistance of employees to participate due to inadequate information about its impacts. They are not sure if its implementation gives more positive or negative impacts. Employees' resistance to do their part during the implementation may lessen because of the knowledge that it has more positive impacts in the enhancement of the quality management system.

It is the top management's full support to the organization that plays the vital role in the success of ISO 9001:2008's implementation. Top management's involvement in awareness, documentation, implementation, monitoring/assessment up to the continual improvement of the QMS is needed. With the full support of the top management, obtaining an ISO 9001:2008 Certification would be easy. Fazli and Khirual-Anur (2008) further deducted from research studies that top management should be taken as capability that emerged from resource-oriented concerns of organization, and leadership capability could be effective in bringing the productive change in organization. Leadership is responsible to develop an organizational culture, which should feature with the integrity and appreciation for employees, strong channelized communication based on internal and external stakeholders and productive relationships with suppliers and customers (Hale

and Hartley, 2005, pp. 255–272). Soltani et al. (2008) proposed a hypothetical model to identify the role of top management in success or failure of total quality management.

NRCP's ISO 9001:2008 implementation provides guidance to the management for achieving sustained success. It also demonstrates the organizations' ability to consistently achieve statutory and regulatory requirements. Teamwork at all levels is of the essence to achieve the said requirements. Motivated, committed, and loyal employees are considered real asset for organizations but poorly structured appraisal system characterized as biased and discriminative could prove frustrating and destructive for employees' morale. Organization should focus on performance appraisal system to remove its potential pitfalls (Pettigrew and Whipp, 1991, p. 131).

Overall, the National Research Council of the Philippines is compliant to the standards of ISO 9001:2008. The impacts of the implementation leads to the enhancements of its quality management system that gave them other benefits like having a Performance-Based Bonus (PBB), higher trust from stakeholders and the assurance to the costumers of being committed to quality service which gives better customer satisfaction ratings.
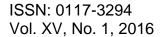
Conclusion

With the advent of globalization, the competitive arena and the flows of information, NRCP has realized that to sustain the competitive advantages, it should focus on the quality of its products and services which they provide to customers. This is why the National Research Council of the Philippines accepted the challenge of the government to adopt a quality management system aligned to ISO 9001:2008 standards. Thus, the effectiveness of the ISO 9001:2008 implementation in the QMS of NRCP is assessed in this study.

The ISO 9001:2008 implementation has created positive impacts to the NRCP, namely: the timely delivery of services to the customers, the strengthened communication between employees and the customers leading to meeting the customers' requirements, and the more efficient, productive, and responsible employees with high morale. All these contributed to the enhancement of its quality management system. Compliance of NRCP to ISO 9001:2008 provides continuous improvement in the NRCP's quality management system despite the challenges met. It improves consistently the operations and employees' awareness of the Quality Management System. It also keeps employees focused on quality services.

Further studies can be made on its impacts in the certified institutions.

Acknowledgement

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