

The Implementation of ISO 9001:2015 to Improve Quality Service: A descriptive Study on a South African Service Organization

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Abstract - The study emphasizes on the execution of ISO 9001: 2015; within a South African service origination that provides learning programs in engineering industries. This study analyses the implementation of ISO 9001:2015 within the service organization. The rationale behind the study is to aid management to understand ISO 9001:2015 and align it with the organization's mission to attain optimum performance while providing the stakeholders with pinnacle quality. A descriptive approach using both quantitative and qualitative methods were utilized to analyze the data gathered from respondents (70 customers). The data was collected within the organization based on the business experience of the respondents. The analysis showed that many complaints from customers on the quality of the service delivered were recorded highlighting that the service company needs improvement in the central administration department and improves the efficiency of the learner's registration. The complaints management graph highlights that the organization needs improvement in the communication process with learners. Nevertheless, it was concluded that some learners are also satisfied with the call center personnel and the service they receive from them.

Keywords – ISO 9001:2015, Quality improvement, Quality systems

I. INTRODUCTION

The new globalization trends require organizations to better understand service quality and resource management capacity for the masses to be assured of the products and commitments offered [1]. To be more efficient and competitive and to enhance customer satisfaction, organizations are incorporating Quality Management Systems into their processes. One of the most used sets of Quality Systems is ISO 9001, its fundamental value is to enable organizations to incorporate an efficient Quality Management System that complements the organization's ability to design, produce and deliver quality products and services. More than one million companies worldwide have been ISO 9001 certified, highlighting that ISO 9001 certification gives an edge to the internal company in the form of product quality and good company performance [2].

A. Problem Statement

Headquartered in Melville, Johannesburg, the service organization provides learning programs in the engineering and manufacturing industries. The organization also

provides staff training to industries and falls under the 21 Sector Education and Training Authorities (SETAs) instituted to enhance skills development in terms of the Skills Development Act of 1998. The service organization has recently been experiencing challenges with regards to adopting ISO 9001:2015 which will aid in achieving optimum service quality. Addressing stakeholders' queries seems to be a challenge that results in the decline of the organization's performance. Customer focus and process approach are the two main sources of concern leading to unsatisfied customers. The organization must have a system in place that manages customer's grievances as well as compliments to alleviate the number of complaints [3].

B. Aim, objectives, and scope of the study

The research aims to aid the service organization on the incorporation of basic concepts of ISO 9001:2015 in order the improved the current operating system.

The objectives of the study are: (1) to provide practices that will assist the organization to execute ISO 9001:2015 with the aim of (2) improving the operational process; (3) To minimize stakeholders' complaints which will enhance the organization's stature.

The research is carried out in a service organization that facilitates skills in the manufacturing and engineering industry in Johannesburg. The study is mainly focused on the customer service and operational sections of the organization only.

C. Importance/Significance/Value

The findings of this research will help identify common errors as well as causes of customer dissatisfaction in the organization under study and the industry in general. The study will also provide an example of the implementation of ISO 9001 as a Quality Management System set and its impact on organizations. This will be used as a benchmark for other similar organizations and academia can draw inferences from the study which will highly contribute to the vast body of knowledge.

D. Background and Rationale

The rationale behind the research is to aid management to understand ISO 9001:2015 and align it with the organization's mission to attain the optimum degree of performance as well as affording the stakeholders with pinnacle quality; to achieve this. Knowing that Quality Management Systems play a crucial role in an

organization's performance process, by conducting this research, the incorporation of ISO 9001:2015 in the organization will provide a good insight into Quality systems.

II. BRIEF LITERATURE REVIEW

A. ISO 9001:2015

ISO 9001 standard contains requirements concerning the Quality Management System issued by the International Organization for standardization. The documents of ISO 9001 are a list of requirements clauses that allows organizations to be consistent in managing processes linked to quality [4]. ISO 9001:2015 is the enhanced version of ISO 9001:2008, the core challenges during the conversion being designing the mandatory databases vital for the viable implementation and quality framework. The proposed solution being a generic model having six importance databases being documented information database; Calculating, control, and analysis of equipment database; Qualified worker database; Complaints on processes output and originality database; Costs of the process output, nonconformity database, Plant, work equipment and Maintenance record [5]. The clauses of ISO 9001: 2015 are: scope, normative references, term and definitions, organizational context, leadership, planning, support, operational, job evaluation, and improvement [6].

B. Quality in Service Organizations

Studies have highlighted that companies can enhance their profits by almost 100 percent by retaining just 5 percent of their customers [6]. The major distinction is that the cost of procuring new customers is higher than that of retaining customers. Many service organizations are driven on the motto "if we take care of our people, they will take care of our customers". The core principles of service quality are people and technology; many organizations rely on call centers as their fundamental way of customer contact [7].

C. Total Quality Management

Total Quality Management is a holistic approach that puts people at the center of a management system with the aim of a continuous increase in customer satisfaction at a continual decreased real cost [7][8]. Five approaches to improve implementation of Total Quality Management include Well-trained Human Resource Managers, implementation of Plan Do Check Act cycle to improve quality, Document review by management to check improvement, the involvement of people both internal and external customers. Proper TQM implementation should include process mapping [9].

D. Integrated Management Framework

The integrated management framework incorporates all components of trade into an all-inclusive framework to empower the accomplishment of its determination and mission that is of higher quality management and an economical improvement. The Integrated Management System has a fundamental rule of continual business change and incremental diagnostic solving based on the Deming Cycle (PDCA) which has been distinguished as one of the approaches to viably actualize the IMS [10][11][12].

The modern ISO 9001:2015 standard also incorporates a quality organization subsystem; typically a subsystem inside the organization's framework utilization is depending upon setting up the vision of a long-term enhancement of the affiliation and the strategies which surrender quality procedure planning to address client issues and prerequisites like updating the introduction of trade getting prepared for the reason of fulfilling trade goals, checking issue improvement and counting the eagerness of accomplices (proprietors, clients, agents) in parallel with setting up the criteria and exercises for taking after the achievement of destinations, an examination of the results finished; building up a sensible interior assignment of expertise and master subordinate on documented exercises for the inspiration behind constraining representatives mistakes [13] [14].

III. METHODOLOGY

A. Research Design

According to [15], a research design is the arrangement of conditions for collecting and analyzing data in a way that desires to merge relevance to the research purpose with economy and procedure [16]. The study is descriptive which follows a mixed approach combining both the qualitative and Quantitative research methods. Quantitative research can be used in response to relational questions of variables within the research while Qualitative research can be described as an unfolding model that occurs in a natural setting that enables the researcher to develop a level of detail from high involvement in the actual experiences [17].

B. Data collection

A questionnaire was utilized as the research tool to collect data under the quantitative approach. The choice of the questionnaire was driven by the following reasons:

- 1) Questionnaires enable one to collect substantial data from a high number of people in a time-effective and cost-effective manner
- 2) It is not mandatory for the researcher to be the one handing out the questionnaires as having another person doing so does not affect its reliability and validity
- 3) The outcomes of the questionnaires can simply be appraised by a researcher or using a software package

4) It offers a wide range of analysis methods scientifically compared to other types of research

5) After data have been evaluated, it may be utilized in contrast with other research and to quantify change [18]. The questionnaire was built upon three sections: Section 1 collected the respondents' demographics such as the gender as well as the highest education level; section 2 collected information on the organization's complaints management system; section 3 was about the organization's problem-solving methods.

Qualitative data on the other side were collected inside the organization based on the respondents' experience with the organization. Interviews were conducted with the customers to collect more details as the questionnaires only provided close-ended questions which constituted a major limitation to their use

C. Sampling

A purposive sample was used in the study since not all employees are aware of Quality Management Systems approaches. The respondents' experience and position in the organization was the sampling guideline process. The population of the study was made of all the customers that makes business with the organization while a purposive sample of 70 of them took part in the study.

D. Data analysis

Data examination is the method of determining meaning from information [19][20]. Data analysis is constituted by examination, categorization, tabulation, testing, or other forms of putting evidence together to make validated conclusions [21]. After collecting the data, Microsoft Excel was used to generating graphs to ease the understanding of the results [22].

E. Validity and Reliability

Validity can be defined as the extent to which the scores from a measure represent the variable they are intended to [23]. Methodological triangulation, part checking, and clarification of the collected data utilizing interviews and record audits and comparing data obtained from both sources of data collection. The triangulation method was used as questionnaires, interviews and passive observations were made to ensure that the data collected were valid.

Reliability can be defined as the consistency of one's measurement [23]. Putting together the quality of research and expansion reliability is dependent on four rationale tests being reliability, validity, internal validity, and external validity [24]. Outlined interview questions manage data collection providing a thorough representation to allow comparison with other researchers. Establish an audit chain by keeping records of primary data and as well as recorded data in a case study database [25][26][27].

An interview aid to conserve compatibility over member interviews and remain consistent throughout the

interview process [28][29][30]. To ensure the reliability of the research as some respondents struggled to understand some questions due to the language barrier. Thus, some questions were translated to respondents into a language they could easily communicate.

IV. RESULTS AND FINDINGS

A. Complaints Management

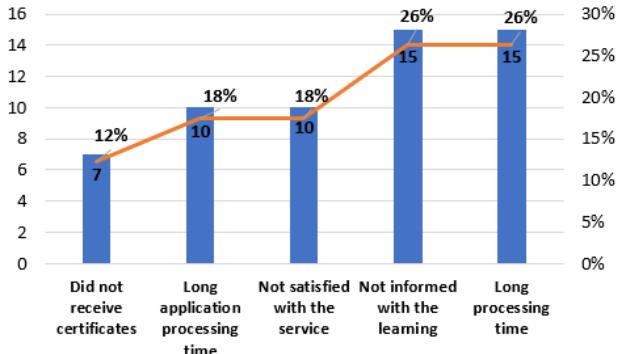


Fig. 1. Customers complaints (Frequency and Percentage Distribution)

The organization has a department that mainly deals with complaints. This was done to be able to monitor all the complaints related to service quality. This approach on its own is a very good one since it allows the organization to track its performance based on the numbers and nature of the complaints. This approach is advocated in the literature (section II c) as part of TQM as it allows organizations to have a clear view of the process and properly track where failure is more likely to happen. In an interview with the manager, 54 complaints were registered per week in the last quarter of 2018. This number is quite alarming as they tend to portray the poor service quality received by the customers.

Fig. 1 above depicts the different types of complaints from customers. The vast majority of customers (almost 60%) complain over the lack of proper information in the learning process and the long processing time of their details capture. These matters should not be overlooked as they portray a serious lack of organization in the company.

B. Problem solving Management

Despite the numerous complaints registered per week, the management of the organization has been busy trying to solve most of them. Thus, in the last quarter of 2018, the management of the organizations has been able to solve 26 of the 54 complaints registered in those weeks as shown in Fig 2. Although almost half the complaints have been resolved, it should be said that most of the customers are still not happy with the way business has been conducted with the organization since complaints are individuals and are not to be taken as a collective matter.

An implementation of the Plan Do Check Act cycle as part of TQM (refer to section II C) can help solve the problem at this level to improve quality.

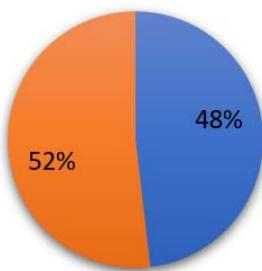


Fig. 2 Complaints management

C. Compliments system

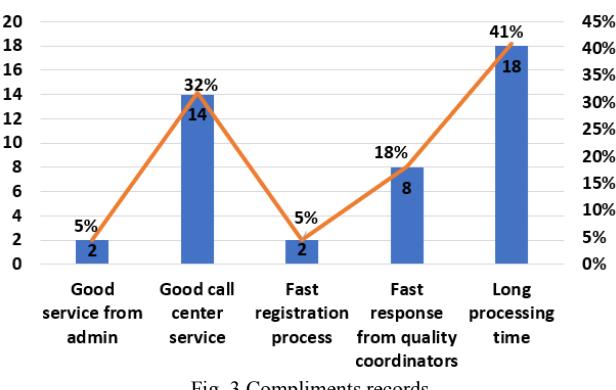


Fig. 3 Compliments records

One of the good approaches from the organization has been to introduce a compliment approach where customers can encourage the organization on the way they have been doing business. When a customer is happy with the service rendered, they can leave a compliment in the organization system as feedback. This practice allows the organization to know exactly the points of improvement.

The compliment systems also allow customers to name the employee that helped them so that the organization can provide a type of incentive to the employee and motivate them to do well. In the last quarter of 2018, a total of 44 compliments have been recorded by the company out of which the majority (40%) complimented the organization on the feedback process which is very fast and satisfactory, 33.3% on the other side complimented the organization on the helpfulness of the personnel which is very great as shown in Fig 3..

C. Discussion

Despite the compliments received by customers, there are still a high number of complaints registered even if some are being solved already. Knowing that improvement should be continuous, the service organization should implement a continual improvement model of a process that assumes that the Quality Management System depicts the process flow. Every process has customers and other interested parties, be it external or internal, that have needs and expectations of the process.

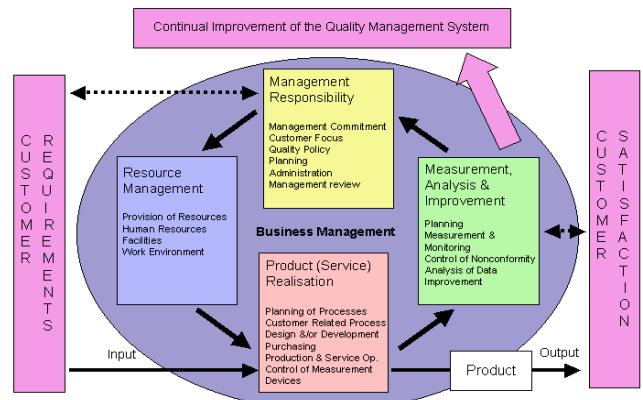


Fig. 4 Continuous improvement model

Other interested parties give insight to the organization and explain what is expected as expected outputs of the process. If the service organization puts together vital data defining process performance with an emphasis on the satisfaction of external and internal customers, to determine areas that require rectifying or improvement. Customer satisfaction can be very much improved. For the above mentioned to come to pass resources such as human capital and material are vital. Thus, Fig. 4 depicts a model of continuous improvement that can be used inside the organization with an effect of both internal and external customers.

V. CONCLUSION AND RECOMMENDATIONS

The current research aimed at assessing the implementation of ISO 9001: 2015 in a service organization located in Johannesburg. It was concluded that the majority of learners are not satisfied with the services received and that the central administration department needs more improvement than all the other departments. The core issue should be to involve employees in the Quality Management System of the organization so that they are aware of what is expected in terms of quality service.

Learners that apply at the service organization follow the proper channels, but their applications take time to be processed, hence the central administration needs improvement strategies than other departments.

It can also be concluded that some customers are also satisfied with the service rendered to them specifically with the call center personnel and the admin of the organization.

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REFERENCES

- [1] Prakasa, "Analysis of Implementation of ISO 9001:2008 quality management system using Gap Analysis", vol. 3, no. 1, 2016. [Accessed 20 April 2020].
- [2] E. Psomas and D. Kafetzopoulos, "Performance measures of ISO 9001 certified and non-certified manufacturing companies", *Benchmarking: An International Journal*, vol. 21, no. 5, pp. 756-774, 2014. Available: 10.1108/bij-04-2012-0028.
- [3] "Mersetra", Mersetra.Org.ZA, 2020. [Online]. Available: <http://www.mersetra.org.za/aboutus/Pages/default.aspx>. [Accessed: 17- Apr- 2020].
- [4] M. Tukiran, Building Quality Management System based on ISO 9001:2015, 2nd ed. Yogyakarta: Leutikaprio Nauvaliter, 2016.
- [5] MILETI., Euler-bernoulli beam with tip mass and passivity - based control. AV AKADEMIKERVERLAG, 2015.
- [6] B. Purwanggono, A. Bakhtiar and R. Rahman H, "Analysis of ISO 9001:2015 certification readiness of JP-Graha product of Jasaraharja Putera using gap analysis", *SHS Web of Conferences*, vol. 49, p. 01005, 2018. Available: 10.1051/shsconf/20184901005.
- [7] J. Evans and W. Lindsay, The management and control of quality. Andover: Cengage, 2012.
- [8] A. Feigenbaum, H. Kandahjaya and M. Jakarta, Total Quality Control, 3rd ed. Terjemahan, 1983.
- [9] M. Murray, Continous Improvement Tools. Chicago: *The Balance Small Business*, 2018.
- [10] M. Olaru, D. Maier, D. Nicoară and A. Maier, "Establishing the basis for development of an organization by adopting the integrated management systems: comparative study of various models and concepts of integration," *Procedia-Social and Behavioral Sciences*, vol. 109, pp. 693-697, 2014.
- [11] C. Q. Institute, "Integrated management system," 2016. [Online]. Available: <http://www.thecqi.org>. [Accessed 20 September 2015].
- [12] V. K. Singh, "PDCA cycle: a quality approach," *Uttam-Journal of Management Sciences*, vol. 1, no. 1, pp.89-96, 2013
- [13] S. X. Zeng, V. W. Tam and N. L. Khoa, "Towards effectiveness of integrated management systems for enterprises," *Engineering Economics*, vol. 21, no. 2, 2015.
- [14] La Verde, G., Roca, V. and Pugliese, M., 2019. Quality assurance in planning a radon measurement survey using PDCA cycle approach: what improvements?. *International Journal of Metrology and Quality Engineering*, 10, p.2.
- [15] P. Leedy and J. Ormrod, Practical Research. Harlow, United Kingdom: Pearson Education Limited, 2020.
- [16] C. Sellitz, L. Wrightsman, S. Cook and L. Kidder, Research methods in social relations. Tokyo: Holt-Saunders, 1981.
- [17] J. Creswell and V. Plano Clark, Designing and conducting mixed methods research. Los Angeles: SAGE, 2018.
- [18] G. Partnership, "Action Research Definition", *The Glossary of Education Reform*, 2020. [Online]. Available: <https://www.edglossary.org/action-research/>. [Accessed: 23- Apr- 2020].
- [19] "Examples of Applied Research", Examples.yourdictionary.com, 2020. [Online]. Available: <https://examples.yourdictionary.com/examples-of-applied-research.html>. [Accessed: 23- Apr- 2020].
- [20] S. Ackroyd and J. Hughes, Data collection in context. Longman, 1981.
- [21] Yin, R. K. (2014). Case study research: Design and methods (5th ed.). Thousand Oaks, CA: Sage Publications.
- [22] Merriam, S. B. (2009). Qualitative research: A guide to design and implementation. San Francisco, CA: Jossey-Bass.
- [23] Wahyuni, D. (2012). The research design maze: Understanding paradigms, cases, methods and methodologies. *Journal of Applied Management Accounting Research*, 10(1), 69–80. Retrieved from <http://www.cmawebline.org/jamar>
- [24] Miles, M.B., Huberman, A.M., & Saldana, J. (2014). Qualitative Data Analysis - A methods sourcebook (3rd ed.). London, United Kingdom: Sage Publications.
- [25] Morse, J. M., Barrett, M., Mayan, M., Olson, K., & Spiers, J. (2002). Verification strategies for establishing reliability and validity in qualitative research. *International Journal of Qualitative Methods*, 1(2), Article 2. Retrieved from <http://www.ualberta.ca/~ijqm/>
- [26] Leedy, P. D., & Ormrod, J. E. (2013). Practical research: Planning and design (10th ed.). Upper Saddle River, NJ: Pearson Education.
- [27] Baxter, P., & Jack, S. (2008). Qualitative case study methodology: Study design and implementation for novice researchers. *Qualitative Report*, 13, 544-559. Retrieved from <http://www.nova.edu/ssss/QR/index.html>
- [28] Clausen, A. S. (2012). The individually focused interview: Methodological quality without transcription of audio recordings. *Qualitative Report*, 17, 1–17. Retrieved from <http://www.nova.edu/ssss/QR/index.html>
- [29] Wynn, D., & Williams, C. K. (2012). Principles for conducting critical realist case study research in information systems. *MIS Quarterly*, 36, 787–810. Retrieved from <http://www.misq.org/>
- [30] "ISO 9001 - Quality Health Safety Environment Consulting", Qhse.co.uk, 2020. [Online]. Available: <http://www.qhse.co.uk/iso9001.htm>. [Accessed: 28- Apr- 2020].