Awareness and Challenges of ISO 9001:2015 Implementation in Higher Education

[1]Francis F. Balahadia, [2]Wilfredo D. Dalugdog & [3]Joseph M. Cabiente

Abstract

This study assessed the awareness on the implementation of International Organization Standardization (ISO) 9001: 2015 in a university and the challenges encountered by the key stakeholders. It also tested the correlation of respondents' demographic profile to the level of awareness and challenges. The study used a descriptive research design and convenience sampling technique with a total of 100 survey participants from senior officials, professors, faculty, and non-faculty personnel. To collect responses, the study used structured survey questionnaire distributed through Google Forms. Descriptive statistics such as frequency count, percentage, and weighted mean as well as Spearman were used for data analysis. The results of the study showed that employees are 'Fully Aware' and 'Aware' on the implementation of ISO 9001:2015, particularly in terms of the quality mission, vision, and objectives. However, employees "Disagree" with the various challenges in the implementation of ISO 9001: 2015. In addition, there was no significant relationship among the respondents' profile, awareness and challenges in the implementation of ISO 9001: 2015 at the university. The study found that while university employees are usually aware of the quality management system's fundamental objectives, they normally disagree on the challenges of putting it into practice. For this, information dissemination should be done on a regular basis while the employees are obliged to also internalize the university's quality management system's vision, mission, and objectives.

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About the authors:

[1]Corresponding author. College of Computer Studies, Laguna State Polytechnic University – Siniloan Campus

[2]College of Criminal Justice Education, Laguna State Polytechnic University – Siniloan Campus

[3]Laguna State Polytechnic University – Siniloan Campus

1. Introduction

The ISO 9001:2015 is recognized as the world's leading quality management standard (QMS) implemented in over one million organizations and institutions all over the world. The implementation of which is undeniably a huge advantage to any organization or institution in providing quality services in meeting their goals with an organized workspace while providing excellent services. This standard can be applied across any organization or specific department to improve performance. Its effectiveness lies on its keys principles of quality management, of which customer's satisfaction is on top of the list. It encompasses the context of institution, restructures a number of information, emphasizes on risk-based thinking, improves applicability for services, and improves leadership requirements (Medic et al., 2015).

Institutions and organizations follow ISO 9001 that ensures processes meet the recognized standard for improving the institutions performance, the satisfaction of customers and maintaining regulatory compliance. As organizations turn to program quality management in enhancing performances, organizations also enhance products and quality services through quality activities (Mukwakungu & Mbohwa, 2018). Accordingly, Neyestani (2016) asserts that it helps institutional performance through the generic guidance and documentation, and persistent development through "Plan-Do-Check-Act" (PDCA) method.

Throughout its progress until 2015, ISO 9001:2015 has been recognized a minimum standard that may be appropriate to meet the demands and expectations of higher educational institutions (HEI). While huge number of HEIs won the trust of stakeholders by adopting ISO 9001 into their systems, Hussein et al. (2017) found Lebanese educational institutions continue to make a little and insignificant contribution. Accordingly, the difficulties have been highlighted to emphasize the need to adhere to quality management system standards. Meanwhile, the effect of quality management on Angola's Higher Education Institutions (HEIs) has attracted interest in recent years. The study of Nicolay et al. (2019) highlighted that institutions must implement and certify a QMS as a differentiating factor among institutions. As ISO 9001:2015 embeds quality principles throughout organizational processes, ISO standards are gradually promoting the usage of QMS in the functional framework. For instance, the maritime upper learning institutions should contain QMS in position as per the International Convention on Seafarer Training, Certification, and Watch keeping. According to Phelivan and Cicek (2021), ISO 9001:2015 encourages complete representation of the quality system to give relevant data for establishing an

efficient QMS and identifying potential gaps and areas for improvement. With this, Oksana (2022) asserts that adoption of ISO standards in higher education would help increase service quality, higher learning institutions' competitiveness, and the global development of innovative societies.

In the recent years, ISO standards are progressively being adopted in educational programs all over the world (EISCAA, 2012) which serves as a competitive advantage as symbol of quality academic programs. It has benefited education institutions in shifting focus from quality of the employees to the institutional performance through new management systems in higher education (Stojanovic, 2015). When organizations have certification based on the internal motivation (productivity improvements, improvements in quality awareness, and internal organization improvements), the resulting benefits have a more global dimension (Heras-Saizarbitoria, 2011; Rosa et al., 2017; Douglas et al., 2003; Van der Wiele et al., 2005; Caridade et al., 2017; Fonseca & Domingues, 2018). However, ISO 9001 in education institutions often lead to poor outcomes (Binmore, 1981). Furthermore, implementing ISO quality standard in higher education would get better the quality of services provided, increase the institution's competitiveness, and, in the long run, foster the creation of an innovative society (Fonseca, 2015).

In the study of Kasperaviciute (2012), the challenges in implementing ISO 9001 relates to internal institutional issues. In addition, higher education institutions have different stakeholders, including customers, which are also part of the key issues (Quinn et al., 2009). For instance, adjunct faculty members and staff are clueless on its implementation (Kagumba & George, 2013) which Bernik et al. (2017) and Kaziliunas (2010) suggest that the entire team must be aware and committed to the entire process. The absence of awareness and knowledge emanates from the lack of appropriate seminars and trainings (Sambil et al., 2018). Training provides employees the required knowledge and skills required for their job (Almeida et al., 2018). Additionally, with increased competition in the educational services market, constant upgrade of people and systems is a crucial requirement for the development of senior education institutions (Shevchenko, 2016).

Another major area in the implementation of quality management is leadership which emanates from the top management. As the leader maps out plans and approaches, employees eventually give importance to the process. The presence and characteristic of being a committed staff in top management should be taken in consideration for a QMS to be successful (Almeida,

2018). Every area of an organization should have managers responsible and capable to fulfill different roles (Keen, 2021). HEIs have more aversion to change than other organizations because it comprises highly educated individuals who may find it difficult to accept criticism of their work approach, they see themselves as a source of information for others. This might be attributed to weak management, which failed to establish the fresh organizational culture and arrangement necessary to support quality management adaptation and execution (Hussein et al., 2014). According to Bernik et al. (2017), quality management system in higher education needs to be implemented in both academic and non-academic units with monitoring and evaluation. Meanwhile, the HEIs need to constantly improve with the objective of boosting national and international competitiveness (Bernik et al., 2017) while addressing obstacles of sustainability (Schmuck, 2021).

Given the premise and arguments, this study aims to determine the level of awareness of university employees on the implementation process of ISO 9001:2015 and the challenges associated with its implementation. It also proves the following hypothesis:
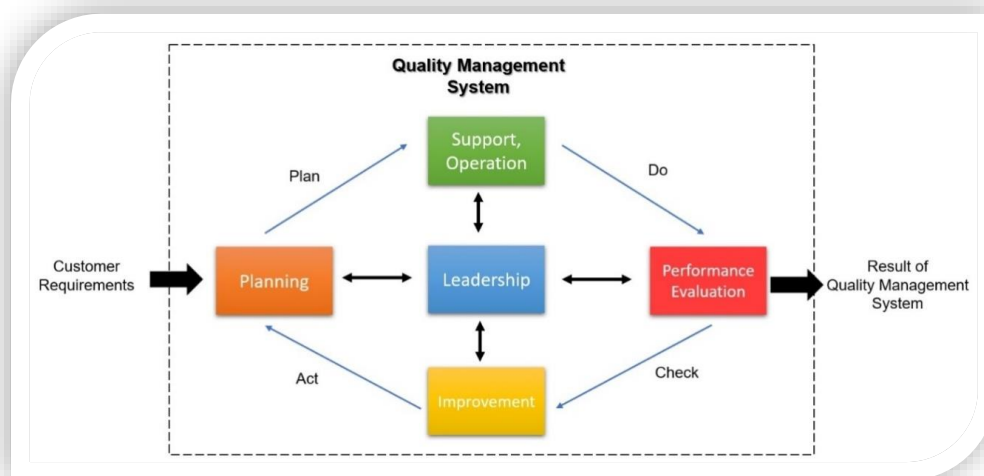
Ho: The level of employee awareness on ISO 9001:2015 is not associated with demographic profile.

2. Theoretical Framework

This study is anchored on the Plan-Do-Check-Act (PDCA) cycle.

Figure 1

Quality Management System Framework

The PDCA cycle has long been a cornerstone of the comprehensive quality management movement. It is a useful tool often used in the automotive sector to manage improvement projects, especially those that happen inside the factory. The process approach, customer focus, staff involvement, improvement, leadership, evidence-based decision making, and relationship management are the seven quality management concepts defined in ISO 9001:2015, which the PDCA cycle is used in the standards framework. People at all levels of the company are engaged and engaging in enhancing the business capabilities to produce and deliver value to customers in a thriving QMS (Nguyen et al., 2018).

The goal of this framework is to create a sense of purpose among employees so that they can work together to achieve quality. This will allow them to line up their strategy, policies, procedures, and resources in order to achieve the quality goals (Algheriani et al., 2019). While the organization assess the QMS performance and efficacy, it should keep suitable written information as evidence of the results and adopt an appropriate monitoring system to attain good performance evolution levels in organizations (Fonseca et al., 2015). One of the goals of PDCA is to ensure that the organization is committed to improving its services, products, and processes in order to improve customer contentment. This entails a greater focus on root cause analysis and the suggestion of prevention and repair activities as needed, in order to satisfy the customer/firm with the results of the quality management system (Elgobbi, 2014).

3. Methodology

This study used descriptive research design in determining the respondents' level of awareness on the various aspects of ISO 9001: 2015. The descriptive research describes what was observed and often concerns with counting or documenting observations about a new unusual problem (Maxfield & Babbie, 2015).

The respondents of the study were 60 teaching and 40 non-teaching personnel of a state university in Laguna. The 100 personnel range from top management to rank and file employees with designations such as senior officials, professors, administrative officer, associate professor, assistant professor, instructor, administrative staff, administrative aide, part-time faculty and job order employees. In order to obtain maximum representation, the respondents were purposively chosen from various range of demographics such as age, sex, job status, position, and years of service. The majority of the respondents are female (60%) from the age bracket of 26 – 35 years

old (41%) followed by 36 – 45 years old (23%) and 18 – 25 years old (20%). With regards to the job status, the part-timer, permanent – non-teaching, permanent – teaching, and temporary comprise 20% each. Majority of them are teaching (54%) with 1-3 years of service (47%) followed by 4-6 years of service (20%).

The study modified an adapted survey questionnaire from Alolayan (2014) and Oluoch (2010). The modified questionnaire was composed of 20 questions to determine the level of awareness on ISO 9001: 2015. In addition, the extent of challenges on the implementation of the ISO 9001: 2015 was adapted from a survey questionnaire of Sharif (2005). The modified survey questionnaire was divided into three parts: demographic profile, level of awareness and challenges faced. The questions were answered using 5-point Likert-type scales. The survey questionnaire was programmed in Google form by the ICT expert in the university.

In order to get maximum participation, the survey questionnaire was posted through the university social media page, sent via private message, and e-mailed to the teaching and non-teaching employees. It was assured that the data gathering was permitted by the university officials before the distribution. The survey was voluntary and employees were oriented on the objectives of the study. It was also assured that data gathered were treated with utmost confidentiality and personnel information were not disclosed at any stage of the study.

The gathered data were analyzed using descriptive statistics such as frequency count, percent, and weighted mean. The Spearman Rho was employed for the inferential analysis of data.

4. Results and Discussion

Table 1 presents that generally the employees have strong level of awareness on the functions and benefits of ISO 9001: 2015. Specifically, the results highlighted that ISO "*is a tool for continual improvement of our institution*" (WM=4.32), "*supports quality policies*" (WM=4.29), "*helps organize business workflow*" (WM=4.25), "*is a tool for handling documentation*" (WM=4.25), "*supports quality mission, vision, and objectives*" (WM=4.25), "is *a tool for standardizing institutional processes*" (WM=4.24), and "*measures customer satisfaction level*" (WM=4.22).

Table 1

Level of Awareness on the Main Functions of the ISO 9001:2015

Indicators	M	VI	Rank
ISO…			
1. helps organize business workflow	4.25	FA	4
2. is a tool for handling documentation	4.25	FA	4
3. is a tool for standardizing institutional processes	4.24	FA	6
4. measures customer satisfaction level	4.22	FA	7
5. takes into consideration internal customer needs (Staff needs)	4.07	A	18.5
6. has full control and monitoring over our suppliers	3.92	A	20
7. is a tool to improve internal efficiency	4.19	A	8
8. is a tool for managing business processes effectively	4.15	A	13.5
9. is a tool to fulfil the customers' needs and requirements	4.14	A	15
10. is a tool for managing and improving quality of our products	4.18	A	9
11. is a tool for continual improvement of our institution.	4.32	FA	1
12. supports quality mission, vision, and objectives	4.25	FA	4
13. support of quality policies	4.29	FA	2
14. defined duties and responsibilities	4.17	A	10.5
15. communicated of quality policies	4.17	A	10.5
16. leads to organized written collection of fundamental practices	4.16	A	12
17. improves customer's confidence on services	4.11	A	17
18. facilitates performance contracting	4.07	A	18.5
19. enhances quality inspection	4.15	A	13.5
20. improve communication within and out of the institution	4.13	A	16
General Weighted Mean	**4.17**	**A**	

Legend: Fully Aware (FA) 4.21 – 5.00; Aware (A) 3.41 – 4.20; Neither Aware or Nor Aware (NA) 2.61 – 3.40; Less Aware (LA) 1.81 – 2.60; Not Aware (NA) 1.00 – 1.80

The results generally imply that teaching and non-teaching employees are fully aware of the continual improvement of the institution, handling documentation, and standardizing institutional processes. Relevant to the findings of Alolayan (2014), the top management's involvement is necessary for the effective implementation leading to the findings of Nassor (2015) on higher employee productivity. The results also assert the findings of Pokisinska et al. (2007) on the ISO's role on organized business workflow, quality mission, vision, and objectives, and customer satisfaction. The results confirm the study of Mukwakungu and Mbohwa (2018) that employees are aware and committed to the importance of ISO 9001 implementation.

Table 2

Challenges in the implementation of ISO 9001: 2015

Indicators	M	VI	Rank
1. There is a lack of understanding the benefits of ISO 900	2.82	U	1
2. No awareness of ISO 900 standard through employees of the institutions	2.5	D	9
3. Lack of top management commitment	2.36	D	14
4. There is no leadership	2.04	D	31
5. No expert people in quality management	2.12	D	30
6. Ineffective communication between departs/offices	2.37	D	13
7. No cross-functional cooperation between department/offices	2.29	D	22.5
8. No employees involvement and empowerment	2.23	D	28
9. No customer feedback	2.24	D	27
10. Additional workload from quality management system	2.74	U	3
11. Customer satisfaction principle not appreciated in the institutions	2.29	D	22.5
12. There is absence of stakeholders' voice in the institutions	2.46	D	10
13. There is lack of achieving training targets.	2.33	D	19
14. There is lack of information	2.34	D	16.5
15. The organization have a difficulty of calibration	2.38	D	12
16. Too difficult to learn the ISO 900 standard and implement them	2.44	D	11
17. No proper organizational structure developed	2.28	D	25
18. There is lack of proper performance measurement system'	2.29	D	22.5
19. Insufficient technology and poor quality management practices in the institutions.	2.34	D	16.5
20. There is lack of local consultants properly qualified in certain sector	2.34	D	16.5
21. There is lack of identification and management of processes in the institutions	2.29	D	22.5
22. Employees did resist change to the existing system in the institution	2.27	D	26
23. There are wrong people in wrong position	2.53	D	8
24. Fear of admitting error	2.67	U	5
25. It is difficult to change the existing system	2.55	D	7
26. Quality is a swear word in the language of many employees	2.72	U	4
27. There are a lack of training programs relating to quality management system	2.6	D	6
28. Employees are not working towards future of the institutions	2.14	D	29
29. Lack of motivation and reward system	2.76	U	2
30. The institutions train its employees without specific purposes	2.34	D	16.5
31. Employees just to look for their own benefits	2.31	D	20

Legend: Strongly Agree (SA) 4.21 – 5.00; Agree (A) 3.41 – 4.20; Undecided (U) 2.61 – 3.40; Disagree (D) 1.81 – 2.60; Strongly Disagree (SD) 1.00 – 1.80

Table 2 presents the challenges in the implementation of ISO 9001: 2015. The identified potential and probable challenges were "*lack of understanding the benefits of ISO*" (WM=2.82), "*lack of motivation and reward system*" (WM=2.76), "*additional workload from quality management system*" (WM=2.74), "*quality is a swear word in the language of many employees*" (WM=2.72), and "*fear of admitting error*" (WM=2.67), which showed personnel on the *undecided* spectrum. The undecided ratings imply that either majority or less than majority of them find the variables an issue. It strongly suggests that the lack of understanding on the benefits of ISO emanates from several factors such as additional workload without proper compensation and the punishments for committing errors. As Hesham and Magd (2007) identified that one of the barriers in the implementation of ISO in the organization is the lack of understanding, this study also associates the understanding to motivation and reward. The employees might be aware of the ISO quality management and its importance but find it additional burden without proper compensation. The issues on motivation, reward and compensation are raised in the studies of Neyestani and Juanzon (2017), Santos et al. (2014) and Willar (2012). The implementation of a quality management system, and its subsequent certification, is a voluntary process, supported by the organization's own motivations, goals and policies. Hence, teaching and non-teaching employees are undecided whether its implementation is considered an additional workload from quality management system or not. However, the swear word in the language of many employees contradicts the study of Sharif (2005) that managers and supervisors disagree on quality as a swear word in the language of many employees. These findings could also highlight the study of Bournabri et al. (2018) that lack of training primes in poor capability in completing tasks associated to the quality management.

Table 3 shows the relationship between the profile of the respondents to the level of awareness and challenges in the implementation of ISO 9001: 2015. The age, sex, job status, position, and years in the service obtained p-values of .767, .780, .876, .994, and .970, respectively, which is greater than 0.05 level of significance. Thus, age, sex, job status, position, and years in the service has no significant relationship to the level of awareness of the employees in the implementation of ISO 9001: 2015. On the other hand, the age, sex, job status, position, and years in the service have p-values of .785, .986, 275, .114, and .218, respectively, which is greater than 0.05 level of significance. Thus, age, sex, job status, position, and years in the service have no significant relationship to the extent of challenges in the implementation of ISO 9001: 2015. The results proved employees have same level of awareness and experience similar

challenges in the implementation of the ISO regardless of their demographic profile. Although the respondents were purposively chosen from range of demographics, their profile do not statistically reflect their assessments of awareness and challenges.

Table 3

Significant Relationship between Respondents' Demographics and Level of Awareness

Variables	S-Tool	C-Value	P-Value	Decision	Interpretation
Age VS Level of Awareness	S	.030	.767	Accept	Not Significant
Sex VS Level of Awareness	P	-.028	.780	Accept	Not Significant
Job Status VS Level of Awareness	E A	.016	.876	Accept	Not Significant
Position VS Level of Awareness	R	-.001	.994	Accept	Not Significant
Years in the Service VS Level of Awareness	M A	-.004	.970	Accept	Not Significant
Age VS Extent of Challenges	N	-.028	.785	Accept	Not Significant
Sex VS Extent of Challenges		-.002	.986	Accept	Not Significant
Job Status VS Extent of Challenges	R H	-.110	.275	Accept	Not Significant
Position VS Extent of Challenges	O	-.159	.114	Accept	Not Significant
Years in the Service VS Extent of Challenges		-.125	.218	Accept	Not Significant

5. Conclusion

The study assessed the level of awareness and challenges of teaching and non-teaching personnel on the implementation of ISO 9001: 2015 to identify their relationships to the respondents' demographic profile. The results showed employees' full awareness on the main functions of ISO 9001: 2015 in the university. It has highlighted the ISO as a tool for continual improvement, support to the university quality policies, mission, vision, and objectives, and organize the workflow of the institution. However, it has identified potential and probable challenges in its implementation including lack understanding of the benefits of ISO 9001: 2015, motivation and reward system in its implementation, and additional workload from quality management system. The test of relationship showed that the demographic profile such as age,

sex, job status, position, and years in the service have no significant relationship to the level of employees' awareness and extent of challenges in the implementation of ISO 9001: 2015.

Since challenges exist in the implementation of ISO 9001:2015, this study recommends the conduct of regular information dissemination about the benefits of ISO 9001:2015 to the students, faculty, non-teaching personnel, administrators, and clientele of the University. Likewise, a reward system through recognition during the celebration of the foundation of the University be given to the various stakeholders on the implementation and adherence to the quality framework.

Although the study was conducted in a single state university, the results has potential implication on the current and future plans of any HEIs in their quality management. Whether educational institutions adopt ISO or not, the implementation of the quality management must be embedded in their systems. As such, the identified awareness level, challenges experienced and the overall challenge on implementing QMS are fundamentals to the initial step in achieving quality. Further studies are encouraged to strengthen the comparisons with other private and public colleges and universities.

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