ISO Quality Management System in Public Higher Education Institutions: Basis for Service Enhancement

Michelle T. Bannawol

Chairperson, Administrative Services, Ifugao State University-Potia Campus, Central Graduate School, Isabela State University, Echague Isabela, Philippines

Abstract

Education institutions, particularly public higher education institutions (HEIs) or state universities and colleges (SUCs), are directed to deliver excellent education to students, in-depth knowledge, ensure academic development aligned with national development demands, and contribute to the attainment of the Sustainable Development Goal (SDG) on quality education. This study investigates the implementation of the ISO quality management system (QMS) in public HEIs. It examines the level of awareness of implementers and their level of agreement on the perceived challenges that they encountered in its implementation, including the benefits of implementing the ISO QMS in terms of the specific service deliveries of public HEIs, which are on dimensions of Instruction services, Research services, Extension services, General Administration and Support services, Resource Generation services, and Responsiveness of the Market. Despite the success of some institutions, the failure of others underscores the necessity for HEIs to adopt quality management practices, satisfy customer needs, and remain competitive. This research employs a descriptive, quantitative approach using survey questionnaires to assess the level of awareness among ISO QMS implementers, identify challenges, and identify the benefits of ISO certification ISO certified SUCs in the Cordillera Administrative Region (CAR), Philippines, consisting of 441 service-provider employees, with or without administrative designations, as respondents. Findings reveal that implementers, mostly female non-teaching staff aged 26–35 with 11–15 years of service, are fully aware of the ISO QMS but face significant challenges, notably a lack of understanding of ISO 9001 benefits. Awareness levels vary significantly by age, job classification, years in service, and position, while perceived challenges differ by sex, years in service, job classification, and position. ISO certification proves moderately to highly beneficial in areas like market responsiveness and service delivery. The study recommends continuous training and development for implementers, enhanced communication from top management, and further research to guide other HEIs considering ISO QMS certification.

Keywords: ISO QMS, public Higher Education Institutions (HEIs), sustainable development goals, quality management, Awareness Challenges Benefits

1. Introduction

Educational Institutions particularly public higher education institutions or state universities and colleges are mandated to deliver excellent education to students, in-depth knowledge, ensure academic

development, and contribute to the attainment of the Sustainable Development Goal (SDG) on quality education. While some organizations experience great success and stay afloat, others eventually failed and closed its operation. This manifests that educational institutions must consider implementation of quality management practices, continuously satisfy customers, and stay ahead of the competitive environment.

With their mandate for quality education, many educational institutions conducted studies and tried every means to improve their services. One tried and tested means is focusing on the importance of quality assurance to the extent of embracing international quality standards with motivation and support from the government.

With the growing popularity and increasing numbers of ISO-certified organizations across many public and private sectors in the global economy, it is still unclear whether this leads to enhanced performance in the academe. As Santos, et.al. (2018) stated, there is a gap of studies on knowing the implementation of ISO 9001:2015 among academic institutions.

With the motivation of the Philippine government requiring ISO part of the productivity and performance measurement to qualify for the Performance Based Bonus (PBB), many public HEIs were motivated to be subjected for ISO certification evaluation. However, it is observed that others only choose or limit the scope of ISO evaluation to one or two of its essential processes or services for survey, passed, receive and enjoy the prestige of being ISO certified institution while the other services essential to public academic organization are left overlooked. For instance, one University will subject for evaluation only one College/Department or unit in their organization such as its College of Criminology but it has other colleges and service departments, or only subject its General Administration and Support Services (GASS) or its Department of Registration and Admission Services (DRAS). Since most previous studies conducted about ISO in HEIs are usually on the challenges encountered during the ISO survey process, and awareness studies, using an empirical approach, this study aims establish the dimensions of public higher education institution for ISO certification, understand the level of awareness of implementers of the mandated services in public HEIs, their challenges in implementing the ISO QMS, and ascertain the benefits of ISO certification on the specific dimensions of public HEIs more particularly to state universities and colleges in the Cordillera Administrative Region, geared towards efficient and effective implementation of quality management in the academe.

2. Methods

This study used the descriptive, quantitative approach using survey questionnaires. The respondents included 441 selected through a stratified random sampling technique. They are permanent employees who are implementers or so called service providers of the institutions mandated services which was the scope of ISO certification of their respective HEIs, with or without designations having administrative responsibilities such as senior officials, professors, associate professor, assistant professor, instructor, administrative officer, administrative staff, administrative aide, and not on official leave.

The survey questionnaire was divided into four parts: The first part determine the demographic profile of the respondents. The second part gather the awareness of the respondents of the ISO QMS, its importance of implementation and certification. The third part gather the level of agreement of respondents on the perceived challenges encountered in the implementation of ISO QMS. The last part gather the benefits for public HEIs in implementing the ISO QMS that is identified specifically per their mandated services. The first, second and third part of the research instrument was adapted from the study of Balahadia, et.al 2022 that was adopted from Alolayan (2014), Oluoch (2010), and Sharif (2005). The last part focus on

determining the general benefits of ISO certification to SUCs in CAR in the specific mandatory services of public HEIs. It was adapted with modifications from the study of Kimani & Okibo (2013).

To ensure that the study complied with the ethical issues pertaining to the research undertaking, permission to conduct the research was sought from the university, and prior consent was obtained from the participants, disclosing the intent of the study.

The data gathered from the respondents were treated with utmost confidentiality and was interpreted with descriptive measures such as the use of frequency count, percentile, and weighted mean. The 5-point Likert scale was used in interpreting the results of the questionnaire.

Table 1. Likert Scale

Interval	Scale	Descriptive Interpretation		
		Level of Awareness	Challenges	Benefits
4.21 - 5.00	5	Fully aware	Strongly Agree	Highly Beneficial
3.41 - 4.20	4	Aware	Agree	Moderately Beneficial
2.61 - 3.40	3	Moderately Aware	Moderately Agree	Beneficial
1.81 - 2.60	2	Less Aware	Disagree	Partially Beneficial
1.00 - 1.80	1	Not Aware	Strongly Disagree	Not Beneficial

Results and Discussions

The data is presented in accordance with the order of the statement of the problem, as follows:

(1) respondents profile, (2) level of awareness on ISO QMS by implementers in HEIs, (3) level of agreement on perceived challenges of ISO implementation, (4) respondents awareness when grouped according to profile, (5) respondents level of agreement of on perceived challenges of ISO implementation when grouped according to profile, (6) benefits of ISO QMS certification in HEIs.

Table 2. Respondents Profile

Profile	Indicators	Frequency	Percent
Age	46-60	103	23.36
	36-45	118	26.76
	26-35	165	37.41
	18-25	55	12.47
Sex	Female	278	63.04
	Male	163	36.96
Job Classification	Non-teaching	250	56.69
	Teaching	191	43.31
Years in Service	1-5	52	11.79
	6-10	76	17.23
	11-15	91	20.63
	16-20	50	11.34
	21-25	59	13.38
	26-30	37	8.39

	31-35	44	9.98
	36-40	32	7.26
Position	**Teaching Group**		
	Professor	7	1.59
	Associate Professor	38	8.62
	Assistant Professor	56	12.7
	Instructor	91	20.63
	Non-teaching Group		
	Administrative Officer	89	20.18
	Administrative Staff	77	17.46
	Administrative Aide	83	18.82

The respondents are employees and implementers of the mandated services deliveries in the public HEIs. Majority of the implementers are ages between 26 to 35 years old. 26.76% ages between 36 to 45 years old. Majority are female, non-teaching, and 11-15 years in service, Administrative Officers and Instructors.

Table 3. HEI Implementers Level of Awareness on ISO QMS

Indicators	Mean	Qualitative Description
ISO..		
1. helps organize business workflow	4.42	Fully Aware
2. is a tool for handling documentation	4.44	Fully Aware
3. is a tool for standardizing institutional processes	4.46	Fully Aware
4. measures customer satisfaction level	4.34	Fully Aware
5. takes into consideration internal customer needs (staff needs)	4.23	Fully Aware
6. has full control and monitoring over our suppliers	4.05	Aware
7. is a tool to improve internal efficiency	4.35	Fully Aware
8. is a tool for managing business processes effectively	4.29	Fully Aware
9. is a tool to fulfil the customers' needs and requirements	4.31	Fully Aware
10. is a tool for managing and improving quality of our products	4.38	Fully Aware
11. is a tool for continual improvement of our institution	4.44	Fully Aware
12. supports quality mission, vision, and objectives	4.44	Fully Aware
13. support of quality policies	4.44	Fully Aware
14. defined duties and responsibilities	4.35	Fully Aware
15. communicates quality policies	4.35	Fully Aware
16. leads to organized written collection of fundamental practices	4.30	Fully Aware
17. improves customer's confidence on services	4.28	Fully Aware
18. facilitates performance contracting	4.23	Fully Aware
19. enhances quality inspection	4.31	Fully Aware

20. improve communication within and out of the institution	4.30	Fully Aware
General Weighted Mean		Fully Aware

The implementers level of awareness on the ISO QMS is fully aware except for the indicator that ISO QMS has full control and monitoring over suppliers.

Table 4. Challenges Encountered in ISO QMS Implementation in HEIs

Challenges	Mean	QD
1. Lack of understanding the benefits of ISO 9001	3.56	Agree
2. Additional workload from quality management system	3.39	Moderately Agree
3. Lack of motivation and reward system.	3.35	Moderately Agree
4. Lack of training programs relating to quality management system.	3.33	Moderately Agree
5. It is difficult to change the existing system in the institution.	3.32	Moderately Agree
6. Employees resist change to the existing system.	3.30	Moderately Agree
7. Fear of admitting error.	3.30	Moderately Agree
8. No awareness of ISO 9001 standard by employees.	3.28	Moderately Agree
9. Ineffective communication between departments/offices	3.25	Moderately Agree
10. There is lack of information.	3.24	Moderately Agree
11. No cross-functional cooperation between departments/offices	3.23	Moderately Agree
12. There is lack of achieving training targets.	3.22	Moderately Agree
13. The organization have a difficulty of calibration.	3.22	Moderately Agree
14. There are wrong people in wrong position.	3.21	Moderately Agree
15. Lack of top management commitment	3.15	Moderately Agree
16. There is absence of stakeholders' voice in the institution	3.14	Moderately Agree
17. Insufficient technology and poor quality management practices in the institution	3.14	Moderately Agree
18. Customer satisfaction principle not appreciated in the institution	3.13	Moderately Agree
19. Employees just look for their own benefits.	3.12	Moderately Agree
20. Lack of proper performance measurement system.	3.09	Moderately Agree
21. Too difficult to learn the ISO 9001 standard and implement.	3.08	Moderately Agree
22. Lack of local consultants properly qualified in certain sector.	3.08	Moderately Agree
23. Quality is a swear word in the language of many employees.	3.07	Moderately Agree
24. Lack of identification and management of processes	3.04	Moderately Agree
25. No employees involvement and empowerment	3.02	Moderately Agree
26. No customer feedback	3.01	Moderately Agree
27. The institution train its employees without specific purpose	3.00	Moderately Agree
28. No proper organizational structure developed.	2.99	Moderately Agree
29. No expert people in quality management	2.97	Moderately Agree
30. Employees are not working towards the future of the institution.	2.96	Moderately Agree

31. No leadership	2.92	Moderately Agree
General Weighted Mean	3.16	Moderately Agree

The respondents moderately agree on the perceived challenges of ISO implementation in public HEIs except for Lack of understanding the benefits of ISO 9001, wherein they unanimously agreed.

Table 5. Benefits of ISO certification in HEIs

A. Benefits on Market Responsiveness	Mean	Qualitative Description
1. Improved general institutional publicity	4.27	Highly Beneficial
2. Student placement after a Course/ graduates competitiveness in the job market	4.12	Moderately Beneficial
3. Improved industrial based learning	4.15	Moderately Beneficial
4. Award of excellence	4.28	Highly Beneficial
5. Constantly reviewing organizational structure	4.21	Highly Beneficial
6. Increase customer satisfaction	4.22	Highly Beneficial
Overall Mean	4.21	Highly Beneficial
B. Benefits on Services Delivery		
1. On time delivery of instruction	4.21	Highly Beneficial
2. Curriculum is reviewed and updated regularly	4.24	Highly Beneficial
3. A curriculum developed in place to suit market needs	4.21	Highly Beneficial
4. Improved delivery of instruction	4.25	Highly Beneficial
5. Partnerships/linkages both locally and internationally	4.26	Highly Beneficial
6. Improved teaching facilities (Installation of media based teaching i.e. multi-media	4.26	Highly Beneficial
Overall Mean	4.24	Highly Beneficial
C. Benefits on Research Services Delivery		
1. Strong image as a research leader	4.12	Moderately Beneficial
2. Intensified conduct of research	4.15	Moderately Beneficial
3. Intensified dissemination of research	4.08	Moderately Beneficial
4. Transparency in the management of research funds and projects	4.13	Moderately Beneficial
5. Intensified conservation of rich cultural heritage	4.15	Moderately Beneficial
Overall Mean	4.13	Moderately Beneficial
D. Benefits on Extension Services Delivery		
1. Intensified community engagement	4.18	Moderately Beneficial
2. Intensified knowledge and technology transfer	4.13	Moderately Beneficial
3. Sustained and strengthened linkages with LGUs/industry partners	4.15	Moderately Beneficial
4. Transparency of extension services funds and projects	4.11	Moderately Beneficial
Overall Mean	4.14	Moderately Beneficial
E. Benefits on General Administration & Support Services		

1. Processes are streamlined	4.28	Highly Beneficial
2. Accessibility of services online and on time	4.22	Highly Beneficial
3. Complaints once raised are addressed on time/improved communication with stakeholders	4.15	Moderately Beneficial
4. Prompt availability of accommodation after application	4.20	Moderately Beneficial
5. Hastened admission process	4.17	Moderately Beneficial
6. Better control of records and documents	4.28	Highly Beneficial
Overall Mean	4.22	Highly Beneficial
Grand Mean	**4.19**	Moderately Beneficial

As a whole, ISO certification is moderately beneficial in public HEIs. It is highly beneficial in terms of Market Responsiveness, Delivery of Instruction services, and General Administration & Support Services. It is moderately beneficial in terms of delivery of Research services and Extension services.

Conclusions

1. The respondents are the employees, who are implementers of the mandated services of state universities and colleges (SUCs) that are ISO certified in the Cordillera Administrative Region (CAR), Philippines. Although respondents were randomly selected, they are key players in the certification and implementation of the ISO QMS in their HEIs and that they are ready to adopt prior to certification.

2. Generally, implementers in public higher education institutions are fully aware of the ISO QMS being implemented in their respective institutions. It has reached the expected maximum level of awareness of implementers of the ISO QMS, however, it does not mean that they have complete knowledge of the ISO QMS. This is manifested with the decline of confidence level of awareness of the respondents from fully aware to just aware on the parameter that "ISO has full control and monitoring over our suppliers." Thereby, the awareness level of the implementers in public HEIs signifies that the CHED and AACCUP academic accreditation standards, which are complied with by public HEIs, intending or not intending for ISO certification, also conform with the ISO standards and that the higher officials who make the major decisions and are expected to guide the implementers are more knowledgeable, committed, and involved in the implementation of the ISO QMS in the HEIs.

3. Implementers continue to face obstacles in implementing ISO QMS in the context of the current state of higher education in the Philippines. Lack of understanding the benefits of ISO QMS by the implementers is a major concern that impose immediate attention by top management in public HEIs. Implementers not fully appreciating the benefits of the ISO QMS outweighs everything. Generally, the respondents moderately agree on the perceived challenges of ISO QMS implementation. The borderline level of agreement of respondents of the perceived challenges of ISO QMS implementation suggests that it will only take a matter of time or minor change in the institution to change the perception of respondents or overcome the challenges. Inspired by a statement by Martin and Thawabieh (2018) wherein they stated that "leadership is the driver of quality," as long as the top management appreciates and supports the implementation of the ISO QMS in the academe, the implementers will be able to hurdle every challenge along the way.

4. The study reports realizations of public HEI goals specific as to their mandated service delivery areas that can be benefited from the implementation of the ISO QMS. It may serve as basis for other institutions of higher learning that are not certified to implement quality management systems according

to ISO standard by focusing on specific factors such as the mandatory services required by government accrediting body.

Recommendations

1. Regardless of age, sex, years in service and position, the implementers of the mandated services of public HEIs as key players in the delivery of services should update themselves with international quality management system more particularly the ISO QMS for an improved delivery of service performance.

2. The high level of awareness of the ISO QMS by implementers should be maintained and boosted by top management by establishing a clear understanding of its benefits. Learning and development opportunities or conducting training sessions for university personnel in order to enhance awareness of the relevance of working with ISO QMS and provide system application skills.

3. A thorough orientation should be conducted to all the persons in charge, like document control officers, document control coordinators, and all program heads, before the HEI implements the ISO QMS. It should start with an orientation of the ISO QMS to all employees who are implementers of service delivery processes at the HEIs. The same orientation should be conducted for every newly hired employee in the institution. A higher level of workshop-training should be conducted to process owners for additional knowledge to improve on their procedures. The orientation should not end with information dissemination only, but also provide assistance for the preparation of required documents and processes. A capacity building exercise for all implementers should also be conducted to ensure full understanding and acceptance of the changes brought about by the QMS implementation, particularly when faced with challenges.

4. The implementers profile must be considered in the conduct of learning and development activities to instill awareness and proper understanding of the benefits of implementation of the ISO QMS. They should be classified and be given the appropriate learning interventions

5. Implementers should strategize to overcome the challenges of ISO QMS implementation in HEIs. The perceived challenges can be overcome with proper communication among the leaders and the implementers. It can be through a meetings, coaching, and mentoring sessions. As stated by Martin & Thawabieh (2018), "leadership is the driver of quality". As long as the top management appreciates and supports the implementation of the ISO QMS in the academe, and is willing to make the change, the implementers will be able to hurdle every perceived challenges and follow through.

6. The result of the study shows that ISO certification is highly beneficial in the public HEIs. Research studies on the implementation of the ISO quality management system in HEIs should be conducted, presented in different platforms, and published for wider dissemination as basis of other HEIs in making decisions to adopt the ISO QMS or not.

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