Integrating Strategic Management Elements and Continual Improvement Practices in the ISO 9001 Implementation as Framework for Achieving Organizational Effectiveness

Richelle Jovellano Manalansan
Doctor of Philosophy in Management
Lyceum of the Philippines University – Batangas

rpjmanalansan@gmail.com

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Abstract: *In this highly competitive world where uncertainties are but normal, strategic management has emerged as one key to survival. To further sustain business, organizations employ continual improvement practices in their operations. Integration of these management systems to achieve organizational effectiveness can be possible through QMS implementation. Thus, this research study aimed to determine the integration of strategic management elements and continual improvement practices in the ISO 9001 implementation of the Department of Education's Schools Division Offices Region IV-A as framework for achieving organizational effectiveness. The study utilized descriptive research design and stratified sampling method covering 330 respondents who belonged to higher level positions from 21 schools' division offices in the region. Responses were tallied and analyzed using frequency distribution and weighted mean. Normality Test using Shapiro Wilk and Spearman Rho was used to test the relationship among the four variables. Further, regression was used to determine the mediating effect of the variables tested. All data were treated using statistical software known as SPSS Version 23. The findings in this research have substantially provided theoretical evidence to prove that integration of strategic management elements and continual improvement practices in the ISO 9001 implementation can achieve organizational effectiveness. It also gives a clearer understanding on the government firms on how to strategically integrate their current management system. As a matter of logic, an organization who operates management systems in a decentralized manner may not attain their much-expected organizational effectiveness that transcends to their overall performance. The key is to integrate these management systems and imbed them into the organizations' culture, vision and mission thereby achieving organizational goals.*

Keywords – *Continual improvement, ISO 9001 implementation, organizational effectiveness, quality management system, strategic management*

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INTRODUCTION

No organization has sustained its business without planning. Documented or not, it is an essential part of the operation that company owners exercise. In so doing, the data and real issues that organizations face are vital information that are worth considering. These include the internal and external organizational environment together with the inevitable changes that come with it. In responding to such changes, organizations that do not settle for the normal usually win the game of survival. However, not all risk-takers can be considered successful in business. Those who continually improve to strategically conquer the threats right in front of them and maximize the opportunities ahead are up for a higher level of sustainability. Strategic management and continual improvement concepts complement each other. Although both can be independently engaged, integrating these into the company's culture could lead to a more effective outcome. An internationally recognized system that captures this integration is the popular ISO 9001 standard also known as Quality Management System (QMS). Effective use of such to the advantage of the organization will bring them in achieving organizational effectiveness.

Success in an organization can be viewed differently depending on the type of industry where the company belongs. In private entities, sustainability leading to business survival becomes their measure of success. However, in government institutions where survival is not an issue, their motivation in reaching their goals is totally different. Empirical research shows that government agencies here and abroad will only establish or improve their systems as mandated by higher authority [1]. These are usually nationwide campaigns that direct all agencies to adopt. Like in the Philippines, strategic planning is a requirement by the Department of Budget to the local agencies in support of submitted budget proposals. Work Financial Plan, Annual Procurement Plan and Annual Improvement Plan are some of those requirements. Additionally, Executive Order No. 605 series of 2007 of former President Gloria Macapagal Arroyo specifically directs government agencies to adopt the ISO 9001 standard as part of the implementation of the government-wide quality management program [2]. It can be gleaned that in public administration, they are viewing these initiatives as compliance to requirement rather than a tool for continual improvement. Thus, the essence of imbedding such in their usual public service seems to be lacking. Consequently, they consider each of their established system as separate entity or project. As a result, instead of positively transforming the culture within an agency through these management systems, maintaining those become burdensome to these public offices.

In 2013, the Philippines' Department of Education (DepEd) Schools Division Offices have established its 6-year Division Education Development Plan as mandated by the Central Office [3]. While planning is good, organizations can go beyond this through strategic management. A powerful system used by successful organizations to maintain their spot or lead in the industry where they belong. It is like playing a dart and aiming the pin to the sweet cherry of success. From the father of management thinking Peter Drucker, "plans are only good intentions unless they immediately degenerate into hard work". Strategic management implementation entails assessment of three elements such as strategic analysis, strategic choice, and strategy implementation. Prior to even developing a strategic plan, analysis of the current and potential issues challenging the organization form part of this process. These can allow them to assess their organizational performance and investigate the macro and microenvironment affecting their operation. Further, these serve as basis in coming up with their best strategic choice and formulating sound strategies that warrant continual improvement in their service delivery. In public administration, strategic management is developed not to gain advantage among others but to comply with their higher offices' mandate. Thus, strategic as it may seem but implementation monitoring, strategy adjustment and effectiveness evaluation are being left behind especially when new mandates are laid on their table.

The same is true with continual improvement. Most government organizations have been employing continual improvement techniques in a manner that is responsive rather than proactive. Since survival is not their priority, they act on things basically as needed and as mandated by their higher authority. Thus, continual improvement has become one area in the public sector that needs to be looked upon. Continual improvement philosophy pertains to any success an organization may previously have achieved as regard to customer satisfaction. Process improvement, employee involvement, and customer orientation are possible determinants of continual improvement. Considering the constantly changing customers' needs and wants, it is an understatement that an organization has not reached its desired state [4]. Such a concept was introduced by W. Edwards Deming, in his Kaizen (continual improvement) approach when he said that "there is no best way in doing things, there's always a better way". But just like planning, continual improvement techniques have no value in an organization until they are used or implemented [5]. Implementation entails prior coordination with important actors of a particular improvement project. A perfect plan can never be put into action if the implementers are not

aware of their participation in making things happen. Apart from the employees, vital in continual improvement is the perception of its customers. Initiating change that may affect the organizations' internal and external customers may lead to dissatisfaction. As such, the voice of the customers must be considered through proper orientation and timely dialogue. Their involvement can better be solicited, and a higher level of success may be attained if they feel that their interests are being taken upon.

Since strategic management and continual improvement are equally important systems in an organization, integrating them through QMS may lead to an even better outcome. QMS explicitly tackles planning and continual improvement in its standard requirement as customer satisfaction focus, prevention of non-conformance and continual improvement have been its rationale during QMS implementation. In the latest survey released by ISO.org [6], the total ISO 9001:2015 valid certificates released were 1,036,833 for 191 countries. Since QMS may be adopted on a voluntary basis for a better to competitive position or quality produce [9]. ISO 9001 certification is only popular for private organizations where competition is stiff, and survival is not guaranteed. Public sector who is not vulnerable to closure has not taken this QMS adoption into serious consideration. According to the latest update of iso.org [6] out of more than a million certificate releases in less than 200 countries only 4750 certificates were granted to public administrations comprising of only about 0.5% of its total certificate releases. In the Philippines only 295 out of 4,162 certificates were from Public Administration. Consequently, government offices from different countries will only decide to commit to quality when mandated by their government [2]. Nevertheless, DepEd [7] has embraced that challenge when most of their offices started to go for ISO Certification. From among these, DepEd Regions 3 and 4A schools division offices were the first two DepEd units in the country to acquire ISO 9001:2015 certificates [7]

However, not all DepEd stakeholders are convinced about the ISO Certification unless they have seen the effect of those who are already certified in their organizational performance, specifically public service delivery [2]. Poor customer service, inefficient processes and unimproved systems do not make any difference to them even if they've already adopted QMS. This can be attributed to empirical studies showing that the effect of ISO 9001 implementation on organization's performance is still inconsistent and unclear [8]. More so, in public administration where financial performance does not dictate survivability, the problem may not be on the ISO 9001 standard itself, but on the manner that these standards are implemented and embedded in organization's culture [2]. It is on how this standard can be used and integrated with other tried and tested management systems currently being employed in the organization. Success of an organization is highly dependent on the appropriate integration of various management systems to continual improvement methodologies [10]

To deeply transcend ISO 9001 Certification with the department's organizational performance, the program "One DepEd, One QMS" has been launched in 2019. This continual improvement initiative aims to align the systems and processes of all offices to one DepEd Philippines direction. In Region IV-A, among the 21 division offices, only two (2) are not yet ISO 9001 Certified although the QMS has been established and implemented. To be able to help the DepEd in integrating their current strategic management elements and continual improvement practices in their ISO 9001 implementation which will serve as framework in achieving organizational effectiveness, this research study was proposed for the Schools Division Offices of Region IV-A.

OBJECTIVE OF THE STUDY

The study aimed to assess the integration of strategic management elements and continual improvement practices in the ISO 9001 implementation of the DepEd's Schools Division Offices of Region IV-A as framework for achieving organizational effectiveness.

Specifically, it aimed to determine the current strategic management being employed by the organization in terms of strategic analysis, strategic choice and strategy implementation; describe the continual improvement practices in terms of process improvement, employee involvement and customer orientation; assess the ISO 9001 implementation in terms of customer satisfaction focus, prevention of non-conformance and continual improvement; assess organizational effectiveness upon ISO 9001 implementation in terms of product quality, financial performance and operational performance; and come up with framework for the integration of strategic management and continual improvement in the ISO 9001 implementation of DepEd Region IV-A leading to organizational effectiveness.

METHODS

Research Design

The study utilized a descriptive research design to determine the integration between the current strategic management elements and continual improvement practices in the ISO 9001 implementation of DepEd Region IV-A's schools division offices as framework for achieving organizational effectiveness. Descriptive research design

was used in this study for an adequate and precise interpretation of the findings. The researcher gathered information from the respondents through providing and distributing survey questionnaires. This descriptive kind of research was helpful in collecting the respondents' data efficiently.

Participants of the Study

The target respondents of this research were members of Schools Division Offices within the DepEd Region IV-A who adopted the ISO 9001:2015 standard in their Quality Management System implementation.

Specific respondents belonged to higher level positions namely top management, middle management, and management levels to give objective responses. Among the 21 Divisions, only two (2) are not yet ISO 9001 certified although the QMS has been established and implemented already. Due to the release of the Department Moratorium 035 Series of 2020, these two (2) schools division offices were not able to complete their ISO 9001:2015 certification. Further, the top management of these divisions are coming from ISO certified division offices. As such, respondents from these divisions are still considered as qualified respondents.

The composition of the sampling population satisfying the above qualification from 21 Division Offices (DO) was 100% of the top management at two (2) per DO, 100% middle management level at three (3) per DO and a minimum of 10 respondents per DO out of the average 30 management positions as stipulated in the DepEd Organizational Structure. This composition has the same ratio with the total population by which the top management and management level position comprises 33.33% of the population. Based on this computation, a minimum sample size of 315 was considered.

Data Gathering Procedure

To come up with the title, objectives and operational framework of this study, the researcher reviewed at least 50 literatures including books, updates, journals, websites, and publications related to the proposed variables. For this purpose, the university resource materials were utilized. Apart from that, the researcher also subscribed to Emerald Insight and Academia.edu for more access to related literature. All gathered research articles were uploaded to the researcher's Mendeley account for easy access and referencing.

To identify specific respondents and gather pertinent data for the study, DepEd website was visited, and a letter request was sent to the Regional Director of the DepEd – CALABARZON through email. The approved letter was received thereafter.

Primary data were generated using survey questionnaires. Respondents were given surveys via email through the help of the DepEd Region IV-A and each Division Offices' Planning Officer. Letter requests were sent to each division office via email for endorsement to specific respondents. Other Superintendents informally endorsed the survey questionnaires in google form to the respondents through social media. A total of 16 endorsements were received out of 21 division offices; five (5) of which were formally endorsed while the rest were sent through emails, Facebook messenger and SMS. In compliance with RA 10173 also known as the Data Privacy Act of 2012, e-mail addresses of the respondents were not collected. Questionnaires in Google Forms were sent to the email addresses of the respondents, copy furnish the Planning Officer of the Region IV-A.

Out of 336 received responses 330 were considered valid. Invalid results are from those respondents who did not qualify in the defined position required by the survey. Response rate cannot be computed in this study as the researcher used the stratified sampling method using the concept of networking in distributing the survey questionnaire. Due to the pandemic, face-to-face distribution was no longer an option. As a result, the researcher solely utilized the online platform in executing the survey questionnaire.

All the 21 Division Offices were requested to join the survey via their official email addresses. Personnel in-charge of their Planning Units were the ones who responded to the researcher and facilitated the endorsement of the survey questionnaires to the defined participants. Upon receipt of endorsement from the Superintendent either formally or informally, the researcher started to contact the respondents either by the provided e-mail addresses of the Planning Unit or via their Social Media addresses. Since every position in the DepEd is utilizing Facebook Messenger or Viber Group Chats, the researcher found a way to contact at least one member of each group chat to forward and share the survey questionnaire within their respective groups. The Superintendents and Assistant Superintendents also helped in disseminating the survey questionnaire in their division group chats.

The targeted 315 respondents were attained with 330 total valid responses. Seventy-nine (79) responses came from qualified members of six (6) division offices in Cavite at 24% of the total 330 respondents. While there are 102 from six (6) division offices in Laguna at 31%, 75 from four (4) division offices in Batangas at 23%, 41 from two (2) division offices in Rizal at 12% and 33 from three (3) division offices in Quezon at 10% with an average of 16 respondents per DO from a total of 21 participating division offices in DepEd Region IV-A.

All respondents answered "yes" in terms of QMS Implementation. Distribution of respondents in terms of their position in the organization are 20 (6%), 26 (8%) and 284 (86%) for top management, middle management, and management respectively. Such a population may not be the same as the expected population of this research study but can still be considered relatable in terms of trend as 13%, 20% and 67% for top management, middle management, and management respectively. The high response rate of management position has understandably reached a higher percentage due to the high population covered by this level. Nevertheless, the bulk of the respondents are considered those who are the lead implementers of strategic management, continual improvement, QMS and organizational effectiveness.

Instruments

The questionnaires were adopted from the studies of Pina et al. [11], Jacobs [12], Scott et al. [13], Niranjan et al. [14], and Psomas et al. [15]. Four sets of questionnaires were used as the major mechanism in collecting the necessary data. All survey questionnaires used a 4-point Likert Scale with responses as 4=High, 3=Moderate, 2=Low to 1=None. These represent the dimensions of strategic management elements, continual improvement practices, ISO 9001 effectiveness and organizational effectiveness as parts 1 to 4 respectively.

The Research Instrument for Strategic Management Elements (Part 1) represented three dimensions as strategic analysis, strategic choice, and strategy implementation as A-C with a total of 20 questions. Strategic analysis was a 6-item each questionnaire. Meanwhile, strategic choice had seven (7) questions taking up number 7-13. Questions on Strategy implementation are numbers 14-20 with seven (7) questions. Survey on Continual Improvement Practices (Part II) represented the dimensions process improvement, employee involvement and customer orientation considered as A to C with a sum of 24 items. Part II was divided into A and B where A was composed of process improvement tools with eight (8) questions from 21-28 and B took up 29-34 with six (6) process improvement methodologies questions. Employee involvement and customer orientation had numbers 35-39 and 40-44 at five (5) questions each.

Research instrument used for ISO 9001 Implementation was adopted from the study of Psomas et al. [15] measured the three objectives of QMS namely customer satisfaction focus, prevention of non-conformance and continual improvement at a total of 16 questions. The Survey questionnaire A was a five-item questionnaire on customer satisfaction focus numbers 45-49. A five-item questionnaire on prevention of non-conformance items number 50-54 and a six-item questionnaire on continual improvement (55-60) were on B and C respectively.

Lastly, survey for Organizational Effectiveness represented the most common determinants of firm performance as adopted in the study of Psomas et al [15]. Measurement of organizational effectiveness used dimensions as product quality, financial performance, and organizational performance in a sum of 18 questions on items 61-78. The first section was a five-item questionnaire on product quality at numbers 61-65. Letter B was a 6-item questionnaire on financial performance at 66-71 and letter C was a seven-item questionnaire on operational performance at 72-78. The total survey questions used in this paper were 78 for a 4-part instrument and 4-variable research study.

One of the recommendations of previous research is to determine its applicability to other countries [9]. A pilot test was undertaken to determine the survey questionnaire's efficacy. Thirty-nine (39) samples were generated from respondents outside the locale of the study. Results were subjected to a reliability test using Cronbach's alpha via SPSS 23. The overall Cronbach's Alpha was computed as 0.96975. This value indicates an excellent reliability of the survey questionnaire.

Table 1 shows the results of reliability test for each of the variables used in this research. During the pilot testing, excluded in the qualified respondents are those who are holding any of these qualified positions for less than three years for an objective response on their perception before and after QMS had been established in their respective Division Offices. It is the nature of the DepEd to transfer their top management from one division office to another for a period of three years.

Table 1. *Survey Questionnaire's Reliability Test Results*

Variable	Cronbach's Alpha	N of Items	Remarks
Strategic Management Elements	.971	20	Excellent
Continual Improvement Practices	.964	23	Excellent
ISO 9001 Implementation Effectiveness	.977	16	Excellent
Organizational Effectiveness	.967	18	Excellent

Scale: *$\alpha \geq 0.9$: Excellent; $0.7 \leq \alpha < 0.9$: Good; $0.6 \leq \alpha < 0.7$: Acceptable; $0.5 \leq \alpha < 0.6$: Poor; $\alpha < 0.5$: Unacceptable*

Ethical Considerations

The researcher guaranteed high level of ethical considerations that maintained the quality and integrity of the research study. Even prior to the proposal, a request letter was sent to the Director of the DepEd Region IV-A seeking for approval to allow conduct of this study, access the necessary data and connect with all the school's division offices within the region. The letter request as well as the salutation of the prepared instrument both provided confidentiality clause stating, "Please rest assured that all gathered data will be regarded with utmost confidentiality and will only be used for the above intended purpose". Moreover, the researcher also coordinated with the authors of the studies being adopted for the operational framework and research instruments of the study. Permission was granted prior to this proposal submission.

In addition, the researcher also ensured that the respondents voluntarily answered the questionnaires according to their will and with full integrity. This was evident in the sentence "Your honest response will be highly appreciated" written prior to the start of the survey". Lastly, it also ensured that none of the respondents of the study will be hurt or harmed thus their safety and security remained to be the top priority of this research study.

Data Analysis

The data gathered in this study were tallied, encoded, and analyzed using various statistical measures. This includes frequency distribution and weighted mean. The data was subjected to Normality Test using Shapiro Wilk and found out that the data is not normal. Thus, Spearman Rho was used to test the relationship among the four variables. Furthermore, regression was used to determine the mediating effect of the variables tested. All the data was processed with SPSS Version 23 statistical software.

RESULTS AND DISCUSSION

Table 2. *Assessment on Strategic Management*

Indicators	WM	VI	Rank
1. Strategic Analysis	3.65	High	1
2. Strategic Choice	3.61	High	3
3. Strategy Implementation	3.63	High	2
Composite Mean	**3.63**	**High**	

Legend: 3.50 – 4.00 = High; 2.50 – 3.49 = Moderate; 1.50 – 2.49 = Low; 1.00 – 1.49 = None

Table 2 displays the summary result on strategic management elements. All were considered high and strategic analysis ranked first with a mean score of 3.65. The least though treated as high also were strategy implementation and strategic choice. Several studies confirmed that strategic analysis is a crucial element of strategic management [16]-[18]. Similar findings were found that the key element of strategic management is to identify the external and internal issues affecting their organization and to analyze the capabilities of an organization in terms of its strengths and weaknesses relative to its stakeholders.

Since the weighted mean of all the strategic management elements were rated high, this is an assertion that DepEd Region IV-A has established and implemented such elements at a level that are being embraced by its Division Offices. The periodic conduct of the Division Education Development Plan is a confirmation that SMS is being practiced at the division level. The highest rating of strategic analysis can further be explained during the pandemic in 2020. Instead of stopping the provision of basic education like in World War II, the DepEd made sure that the right of every learner to education will never be suppressed.

But rather than jumping over the strategic choice and implementation which will not warrant success, they have initially conducted strategic analysis to come up with the Learning Continuity Plan that will lead them to the right direction that would guarantee winning for the DepEd. Since strategic choice and implementation were entrusted to every Division Office, division-wide execution may have some lapses. The reason why these elements ranked lowest in this research. The region also anticipated such, as they had a quarterly review of the LCP's implementation and rectified the identified flaws at once. In the end, successful execution of the LCP was achieved for SY 2020-2021.

Table 3.

Assessment on Continual Improvement Practices

Indicators	WM	VI	Rank
1. Process Improvement Tools	3.50	High	4
2. Process Improvement Methodologies	3.54	High	3
3. Employee Involvement	3.58	High	2
4. Customer Orientation	3.62	High	1
Composite Mean	**3.56**	**High**	

Legend: 3.50 – 4.00 = High; 2.50 – 3.49 = Moderate; 1.50 – 2.49 = Low; 1.00 – 1.49 = None

Table 3 displays the summary result of the respondents on continual improvement practices. All indicators were observed as high where customer orientation is the most visible. This contradicts the study of Ludwiczak [19] which showed that in selected government offices soliciting customer satisfaction is carried out in a limited manner and mostly at the level of the entire office where customer satisfaction of individual processes is not being measured. Such contradiction may be explained by the implementation of ISO 9001 in DepEd Region 4A's division offices where customer communication is a must to enhance customer satisfaction. Further, division offices'

clients can be easily reached as they are their own teachers and school heads whom they have clout over.

On the other hand, process improvement methodologies and tools were considered the least in the rank. In the literature review of Atem and Yella [20] they discovered three reasons why improvement programs are not pushing through. These are lost interest, un-sustained interest, and lack of know-how. This was further supported by the findings of Tom [21] that companies who successfully implemented improvement programs are those matured companies known to be well-versed in using process improvement tools such as Toyota, Motorola, GE, Ford Motor Company, Boeing and Catterpillar. These organizations are already using recent applications of agile tools and methodology to introduce improvement and more flexibility into their processes.

This result is an affirmation that process improvement tools being practiced in the division offices are those commonly being used in problem solving. Since division offices are confined with the mandates set to them by the department, initiative to use highly sophisticated and more practical tools that would further enhance their continual improvement practices.

Table 4

Assessment of ISO 9001 Implementation

	Indicators	WM	VI	Rank
1.	Customer Satisfaction Focus	3.61	High	1
2.	Prevention of Non-Conformance	3.58	High	3
3.	Continual improvement	3.60	High	2
	Composite Mean	**3.60**	**High**	

Legend: 3.50 – 4.00 = High; 2.50 – 3.49 = Moderate; 1.50 – 2.49 = Low; 1.00 – 1.49 = None

Result in Table 4 shows that the status of ISO 9001 implementation was high. There is almost an equal assessment, however, customer satisfaction focus was the most observable with mean value of 3.61. The high composite mean proves that division offices adopt and implement an effective QMS implementation that focuses on these three indicators. looked upon.

The findings of Neyestani [8] Bakator and Ćoćkalo [22] and Njenga [23] have shown alignment with this result. In their research, they have proven that enhancement in customer satisfaction through customer service improvement has a positive and significant relationship with ISO 9001 implementation.

Prevention of Non-Conformance was the least rated though still high based on the respondents' evaluation. Nikolay [24] supported these findings as preventing non-conformance entails two types of costs. The cost of correction of non-conforming product or service which appeared to be the actual non-conformity and the cost of corrective actions to address the cause of actual and potential non-conformities. The operation of DepEd division offices is funded by the national government although other programs get to be funded by the local government units and other partner institutions through their social mobilization and partnership unit. Thus, budget and resources for specific projects are limited and there is no room for other unplanned actions. Since this is the case, division offices are more focused on attaining zero non-conformities during actual audits instead of achieving effective and efficient processes that would ascertain non-conformity prevention.

Table 5

Assessment of Organizational Effectiveness

	Indicators	WM	VI	Rank
1.	Product Quality	3.56	High	2
2.	Financial Performance	3.55	High	3
3.	Operational Performance	3.58	High	1
	Composite Mean	**3.56**	**High**	

Legend: 3.50 – 4.00 = High; 2.50 – 3.49 = Moderate; 1.50 – 2.49 = Low; 1.00 – 1.49 = None

Table 5 shows the result on organizational effectiveness. Operational performance was considered the most effective among the three components. The result below is synonymous with the studies of Terlaak and King [25] and Andrews et al. [26] which state that high rating on the dimension of organizational effectiveness depends on the nature of respondents. Administrative data-based research and research involving respondents from within the company appear to be more likely to focus on effectiveness, efficiency, and equity, which are all aspects of operational performance. Survey data from respondents outside of companies, such as clients, on the other hand, appears to be more concerned with responsiveness, satisfaction, and trust [26]. ISO-certified colleges focused solely on improving operations management, ignoring other areas of educational services such as consumers' multifaceted demands and expectations.

This is so because each division offices use their OPCRF result in measuring operational performance which can be directly considered to be a determinant of organizational effectiveness. This scenario is common to most of the government agencies where product quality and financial performance will not dictate their market presence and market share. Whatever service quality they render to their clients or financial results they report to the government will not affect their sustainability and eventual survival**.** The ranking on organizational effectiveness is followed by product quality. The DepEd has already taken its first leap to ensuring product quality through its "Sulong Edukalidad" program. It focuses on four aggressive reforms in basic education which they term to as KITE or (1) **K** to 12 curriculum review and update, (2) **I**mproving learning environment, (3) **T**eachers upskilling and

reskilling, and (4) **E**ngagement of stakeholders for support and collaboration [7]. Region IV-A's response to the KITE program of the department is the QUBE. CALABARZON's Pivot 4A, QUBE is the flagship initiative of DepEd Region 4A in support of the DepEd's Sulong Edukalidad program, which aims to improve the region's (QUBE) Quality of Basic Education [7].

The lowest rating in organizational effectiveness although still high was financial performance. Since this government agency is a non-revenue earning organization, financial performance is expected to be of their least priority in terms of consideration. Division offices will only be rated in financial performance through resource allocation based on the given general appropriations by the Department of Budget and Management.

Table 6

Relationship Between Strategic Management Elements and ISO 9001 Implementation

Strategic Analysis	**rho-value**	**p-value**	**I**
Customer Satisfaction Focus	.722**	0.000	HS
Prevention of Non-Conformance	.695**	0.000	HS
Continual improvement	.716**	0.000	HS
Strategic Choice			
Customer Satisfaction Focus	.762**	0.000	HS
Prevention of Non-Conformance	.765**	0.000	HS
Continual improvement	.754**	0.000	HS
Strategy Implementation			
Customer Satisfaction Focus	.732**	0.000	HS
Prevention of Non-Conformance	.727**	0.000	HS
Continual improvement	.755**	0.000	HS

Legend: Significant at p-value < 0.01
Interpretation (I); Highly Significant (HS)

Table 6 presents the association between strategic management elements and ISO 9001 Implementation. The computed rho-values show a strong direct correlation, and the resulting p-values are all smaller than 0.01 alpha. This implies that there is a significant relationship between the state of strategic management aspects and the effectiveness of ISO 9001 implementation. This holds true with findings of Moldovan [27] where he found advantages of implementing both the requirement of ISO 9001 and the organization with the strategic objective. Rusjan, and Alič [28] also support this result by classifying the major identified and empirically verified benefits to company objectives of implementing and complying with the pre-conditions of ISO 9001 standard.

Organizations which are implementing QMS through adopting the ISO 9001:2015 Standard are familiar with these tools as the standard promotes risk-based thinking [6]. The standard requirement is for the organization to determine the risks and opportunities that are relevant to the internal and external issues of the organization and take appropriate action on the identified risks. It is also a good tool in evaluating the status of the implementation of the formulated plan as the standard requires internal audit which eventually leads to external audit. Organizations which are implementing ISO 9001:2015 are required to report changes on internal and external issues during management reviews as one of its agenda.

Another requirement of the standard is to identify the risks relevant to the organization. Risk is defined by ISO 9001:2015 as the uncertainty on an unexpected result. According to ISO 9001:2015 0.3.3 risk is often thought of only in a negative sense. However, risk-based thinking can also aid in identifying opportunities which can be considered as the positive side of the risk. Organizations which are embracing the ISO 9001 standard and implements the requirements will be able to use such as advantage to the company.

Unfortunately, not all are looking at the standard this way, sadly others are implementing QMS for the sake of certification. The current strategic management system through the 6-year Division Education Development Plan being used by DepEd R4A Division Offices indicates that strategic planning is already in place since 2016. If only this will be integrated with the QMS implementation, an organizational effectiveness will be guaranteed.

Table 7

Relationship Between Strategic Management Elements and Continual Improvement Practices

Strategic Analysis	**rho-value**	**p-value**	**I**
Process Improvement Tools	.728**	0.000	HS
Process Improvement Methodologies	.723**	0.000	HS
Employee Involvement	.734**	0.000	HS
Customer Orientation	.816**	0.000	HS
Strategic Choice			
Process Improvement Tools	.793**	0.000	HS
Process Improvement Methodologies	.771**	0.000	HS
Employee Involvement	.795**	0.000	HS
Customer Orientation	.989**	0.000	HS
Strategy Implementation			
Process Improvement Tools	.776**	0.000	HS
Process Improvement Methodologies	.770**	0.000	HS
Employee Involvement	.775**	0.000	HS
Customer Orientation	.831**	0.000	HS

Legend: Significant at p-value < 0.01
Interpretation (I); Highly Significant (HS)

The relationship between strategic management aspects and continuous improvement strategies is seen in Table 7. The computed rho-values show a strong direct correlation, and the resulting p-values are all smaller than 0.01 alpha. This implies that there is a significant

relationship and that the higher the status of strategic management elements, the better the continuous improvement. It is an affirmation that although strategic management and continual improvement can be regarded as separate entities, the relationship between these two is highly significant and integrating both would entail optimal results for the organization. Like the studies of Salah [10] and Ullah Khan [29] which mainly introduced the need, benefits, and competitive advantage on the integration of QMS and CI methodologies with other Management Systems, this result can be associated with it.

Continual improvement practices being employed in division offices are focused on school-based improvement. The Planning and Research Unit of each division office is focused on data management rather than facilitating strategic management. Researches from different schools are maintained and stored in databases but are not even summarized to initiate continual improvement. These are rather kept as the basis for awards, recognition, and promotion. A successful strategic management process of an organization utilizes the available technology and formulates innovative solutions before and during the strategic analysis and even in the strategic management implementation. This way, the sweet cherry of success will be at a bull's eye to organizations which effectively integrates strategic management elements and continual improvement practices. Thus, a better outcome is highly possible when two stand-alone variables are merged in one system.

Table 8

Relationship Between Strategic Management Elements and Organizational Effectiveness

Strategic Analysis	rho-value	p-value	I
Product Quality	.737**	0.000	HS
Financial Performance	.681**	0.000	HS
Operational Performance	.675**	0.000	HS
Strategic Choice			
Product Quality	.775**	0.000	HS
Financial Performance	.753**	0.000	HS
Operational Performance	.731**	0.000	HS
Strategy Implementation			
Product Quality	.736**	0.000	HS
Financial Performance	.761**	0.000	HS
Operational Performance	.726**	0.000	HS

Legend: Significant at p-value < 0.01
Interpretation (I); Highly Significant (HS)

Table 8 displays the association between strategic management elements and organizational effectiveness. The computed rho-values show a strong direct correlation, and the resulting p-values are all smaller than 0.01 alpha. This indicates that there is a considerable link, and that the higher the status of strategic management aspects, the higher the organizational effectiveness. These values connote a high significant relationship between the effective execution of strategic management elements as strategic analysis, choice and implementation, and the value that this may add to the organizational effectiveness as determined by product quality, financial and operational performance.

Strategic management uses factual data to guide decision makers not only in making sound decisions but to formulate winning strategies for organizational effectiveness. It is like playing a dart and aiming your pin to the sweet cherry of success. Further, strategic management is a vital system of the organization through a well formulated and comprehensive strategic plan that will surely bring success to the organization. However, such a plan will only work to the firm's advantage if properly executed. This can only be done if all members are playing their role for the realization of the firm's goal and organizational effectiveness. This finding is in congruent with that of AlDhaheri et al. [30] which concluded that strategy implementation has a significant and positive impact on organizational performance within government institutions in UAE. Another example of this study's consistency comes from Ayuya et al. [31], which discovered that there is a link between strategic choices and business performance.

Table 9

Relationship Between Continual Improvement Practices and ISO 9001 Implementation

Customer Satisfaction Focus	rho-value	p-value	I
Process Improvement Tools	.720**	0.000	HS
Process Improvement Methodologies	.781**	0.000	HS
Employee Involvement	.817**	0.000	HS
Customer Orientation	.766**	0.000	HS
Prevention of Non-Conformance			
Process Improvement Tools	.745**	0.000	HS
Process Improvement Methodologies	.799**	0.000	HS
Employee Involvement	.805**	0.000	HS
Customer Orientation	.763**	0.000	HS
Continual improvement			
Process Improvement Tools	.770**	0.000	HS
Process Improvement Methodologies	.808**	0.000	HS
Employee Involvement	.814**	0.000	HS
Customer Orientation	.758**	0.000	HS

Legend: Significant at p-value < 0.01
Interpretation (I); Highly Significant (HS)

Table 9 presents the association between continual improvement and ISO 9001 effectiveness. The computed rho-values show a strong direct correlation, and

the resulting p-values are all smaller than 0.01 alpha. This suggests that there is a substantial relationship and that the more effective the ISO 9001 implementation is, the better the continuous improvement processes are. This data further proved that an efficient and effective ISO 9001 implementation continuously improves and produces an even enhanced customer satisfaction, quality service delivery and improved internal efficiency. When the top management decides to commit to quality by adopting ISO 9001 Standard for QMS implementation, commitment to continual improvement is already at hand.

The first step to continually improve the organization's systems and processes, is improving the overall performance of the firm. An effective QMS may be translated to an improved corporate image thereby attaining competitive advantage [23]. It also demonstrates that ISO 9001 implementation through customer satisfaction focus, and continuous improvement can deliver benefits if firms' managers will be able to carefully design the QMS implementation strategy that guarantees competitive edge among firms' competitors [32]. While preventive action used by Kafetzopoulos [9] focuses on the installation of control measures to prevent the occurrence of process deviation, rejects, and reworks such action requires additional resources to safeguard non-conformances incurring lesser revenue for the company, thereby nullifying continual improvement on resource management. The reason why in the latest version of the standard ISO 9001:2015, instead of preventive action the concept of continual improvement was introduced. Upon identification of risks and opportunities pertaining to an internal and external issues as well as potential non-conformities, continual improvement must take place.

Table 10

Relationship Between ISO 9001 Implementation and Organizational Effectiveness

Customer Satisfaction Focus	rho-value	p-value	I
Product Quality	.828**	0.000	HS
Financial Performance	.784**	0.000	HS
Operational Performance	.809**	0.000	HS
Prevention of Non-Conformance			
Product Quality	.817**	0.000	HS
Financial Performance	.792**	0.000	HS
Operational Performance	.829**	0.000	HS
Continual improvement			
Product Quality	.825**	0.000	HS
Financial Performance	.768**	0.000	HS
Operational Performance	.807**	0.000	HS

Legend: Significant at p-value < 0.01
Interpretation (I); Highly Significant (HS)

Table 10 displays the association between ISO 9001 implementation and organizational effectiveness. The computed rho-values show a strong direct correlation, and the resulting p-values are all smaller than 0.01 alpha. This suggests that there is a considerable relationship and that the more effective the ISO 9001 implementation, the more likely the organization is to attain organizational effectiveness.

The findings above proved that an effective implementation of ISO 9001 leads to an improved product or service quality, operational and financial performance. This is in congruent with several research studies of Mangula [33], Prates and Carashi [34], Abdulrahman [35], Njenga [23], Matata and Wafula [36] Prado-Roman et al. [37], and Tabassum [38] which confirms that ISO 9001 effectiveness guarantees internal efficiency of processes thereby attaining improved organizational performance without compromising the quality of products or service delivery as well as the financial aspect of the organization.

Looking at the results in terms of financial performance, some inconsistencies were noted with the results obtained by Kafetzopoulos et al. [9] and Prado-Roman et al. [37] who answered the doubts on the economic value of ISO 9001 and the criticisms that QMS implementation is costly and time-consuming through the negative results that they got [39]. They explained that effective implementation of QMS entails flexible work practices and additional manpower for quality assurance which requires extra costs thereby affecting profitability. However, they pointed out that this effect may only be felt in the next few years upon certification. On the other hand, the same result as this current study was obtained in the research of Yahia-Berrouiguet [40], Njenga [23] and Novokmet, and Rogošić, [41] which proves that companies at a higher maturity level in QMS implementation have better long-term financial outcomes.

Additionally, the researcher found congruency of such with the studies of Tabassum [38], Popova [42] and Manalansan [2] who supported the idea of internal integration of QMS and other improvement tools to attain improvement not only in quality but in the overall organizational performance of a firm. The time element on the previous and current study is also one logical interpretation of this result contradiction. The released ISO 9001:2015 version in September of 2015 has introduced a more significant changes than with that of the 2008 version used in the studies of Kafetzopoulos [9] and Prado-Roman et al. [37] The latter congruence is more relatable to the obtained findings as the standard used by the respondents is the 2015 version. Further since the DepEd is a non-revenue earning agency, financial performance is very much attainable as it only connotes performance on financial management. Financial performance measures can only be through submission of work financial plan,

annual improvement plan and annual procurement and liquidation reports on project implementation and resource utilization to the Department of Budget and Management and Commission on Audit.

Table 11
Relationship Between Continual Improvement Practices and Organizational Effectiveness

Process Improvement Tools	rho-value	p-value	I
Product Quality	.782**	0.000	HS
Financial Performance	.756**	0.000	HS
Operational Performance	.760**	0.000	HS
Process Improvement Methodologies			
Product Quality	.811**	0.000	HS
Financial Performance	.780**	0.000	HS
Operational Performance	.785**	0.000	HS
Employee Involvement			
Employee Involvement	.821**	0.000	HS
Financial Performance	.792**	0.000	HS
Operational Performance	.802**	0.000	HS
Customer Orientation			
Employee Involvement	.774**	0.000	HS
Financial Performance	.741**	0.000	HS
Operational Performance	.728**	0.000	HS

Legend: Significant at p-value < 0.01 | Interpretation (I); Highly Significant (HS)

Table 11 presents the association between continual improvement practices and organizational effectiveness. The computed rho-values show a strong direct correlation, and the resulting p-values are all smaller than 0.01 alpha. This suggests that there is a substantial link and that the better the continuous improvement procedures, the more likely the company will be effective.

Service delivery is not all about producing and delivering customers' requirements but to consistently convert resources into quality products by optimally using the firm's available resources at the shortest time possible. When the performance of a firm is just as good as their previous performance, adapting to the ever-changing environment and customers' demands may be at risk. W. Edward Deming's Kaizen Approach to total quality management still holds true that there is no best way in doing things but there is always a better way. This was reinforced by Tabassum [38] when he used the concept of continual improvement in his study. Also supporting this finding are studies of Kafetzopoulos et al. [9], Tabassum [38]; Popova [42] which revealed that firms' readiness for continual improvement of their operational efficiency via the adoption of lean concept leads to achievement of higher objectives [42].

Table 12. *Relationship Between Strategic Management Elements, Continual Improvement Practices, ISO 9001 Implementation and Organizational Effectiveness*

	Strategic Management Elements	Continual Improvement Practices	ISO 9001 Implementation	Organizational Effectiveness
Strategic Management Elements		.894**	.822**	.803**
Continual Improvement Practices	.894**		.873**	.875**
ISO 9001 Implementation	.822**	.873**		.870**
Organizational Effectiveness	.803**	.875**	.870**	

*Legend: Significant at p-value < **0.01*

To come up with a customized framework in the integration of strategic management and continual improvement in the ISO 9001 implementation, this research paper manifested the integration of the four variables through ISO 9001 as mediator. Results showed a highly significant relationship between strategic management and continual improvement, strategic management and ISO 9001 implementation, continual improvement and ISO 9001 implementation, strategic management and organizational effectiveness, continual improvement and organizational effectiveness and ISO 9001 implementation with organizational effectiveness.

The test statistic for the Sobel test is 12.99, with an associated p-value of 0.000. Since the observed p-value falls below the established alpha level of 0.05, it indicates that the association between the strategic management elements, continual improvement practices and organizational effectiveness is reduced significantly by the inclusion of the mediator ISO 9001 Implementation in the model, thus there is evidence of mediation.

Castell [43] also supported these findings proving that customization of QMS implementation, continuous assessment, and update of the QMS potentially allow government managers and quality practitioners to develop or improve strategies for ISO 9001 implementation of organizations thereby achieving organizational effectiveness. Hence, coming up with a framework that simulates such significant findings of this study as demonstrated in Figure 1. The framework above was quantitatively and qualitatively statistically supported by the mediating effects that ISO 9001 implementation effectiveness correlated to organizational effectiveness and mediates the strategic management elements and continual improvement practices. Strategic management elements can be determined by strategic analysis, strategic choice, and strategy implementation.

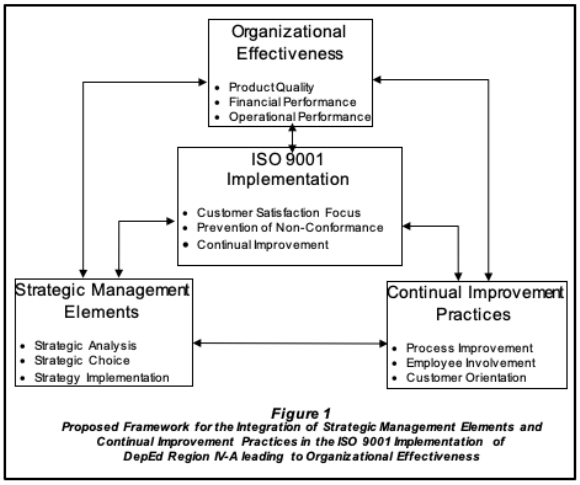

Figure 1
Proposed Framework for the Integration of Strategic Management Elements and Continual Improvement Practices in the ISO 9001 Implementation of DepEd Region IV-A leading to Organizational Effectiveness

On the other hand, continual improvement dimensions are process improvement, employee involvement and customer orientation. Plans must be strategic to survive in this ever-changing world. Such strategies must lead to continual improvement to gain competitive advantage in the industry. The double-headed arrow represents the complementary nature of strategic management elements and continual improvement practices.

The avenue where integration of these two variables can be entrenched is in the ISO 9001 implementation. Thus, the double headed arrows amongst strategic management elements, continual improvement practices, ISO 9001 implementation and organizational effectiveness. The three indicators of ISO 9001 Implementation namely customer satisfaction focus, prevention of non-conformance and continual improvement depict the three QMS rationale. As such these had proven to become the best measures in determining the level of ISO 9001 implementation in an organization. This represents the double-headed arrow showing the relationship between ISO 9001 implementation and organizational effectiveness. Product quality, financial performance and operational performance are proven as determinants for organizational effectiveness. Moreover, the proposed framework may lead to a customized organizational process map for the Division Offices of DepEd Region IV-A or even in any Schools Division Office within the DepEd.

This research study may have proven the advantage of integrating strategic management elements and continual improvement on ISO 9001 implementation effectiveness but still some limitations are associated with it. These may serve as basis for further conduct of future studies that would warrant numerous evidence to support the objectives of ISO 9001. Considering that this study solely gathered assessment of the respondents, accurate data may not be obtained specifically on financial performance. In this regard, the study suggests that future researchers use a combination of primary and secondary data gathering techniques for financial performance. Primary data may be improved by employing a more rigid qualification on the target respondents within a wider range of locale. This can be done through limiting respondents from management level position holders to those who are directly involved in executing the ISO 9001 implementation to ensure reliability of assessment. Those who have direct access to the needed information may be deemed as more appropriate respondents not only within one region but the whole country as well. Qualifications may also be related to tenure or those who were present in the firm before and years after certification provided that the survey questionnaire on demographics would warrant clear understanding on the respondents pertaining to this matter. Additionally, since the research was conducted within the locale of the study customizing the survey questionnaire on the current setup and terminologies being used by the respondents, it is suggested to investigate its applicability to other government agencies, private entities, manufacturing, or other service industries or even in other countries basically adopting the same construct and modifying instrument applicable to that specific industry.

CONCLUSION AND RECOMMENDATION

Based on the findings in this research study, the researcher has substantially provided theoretical evidence to prove that integration of strategic management elements and continual improvement practices in the ISO 9001 implementation can achieve organizational effectiveness. The following conclusions were proven: High results were obtained proving that strategic management systems can be executed using strategic analysis, strategic choice, and strategy implementation. Public administration has proven to conduct strategic analysis religiously and is perceived to implement such. Continual improvement practices such as process improvement methodologies, employee involvement and customer orientation are highly utilized in public administration.

Organizations adopting the ISO 9001:2015 standard have high regard with these three determinants as these are embedded in the standard itself by which they are required to comply with; Public administration has a high degree of organizational effectiveness. This study proved that the survival of a public institution does not depend on their financial capability but on how they perform their operation in the delivery of service to the society by which they cater. Their adherence to the mandates of their mother agency as well as the other branches of the government seem to become their measure of organizational performance. Results showed a highly significant positive relationship among these four variables. This ascertained the mediating effect of ISO 9001 implementation on organizational effectiveness through the integration of strategic management elements and continual improvement practices.

As such, the researcher has come up with the following recommendations: Government agencies may initiate alignment of their strategic choice with the result of

their environmental scanning or strategic analysis. Public administration may explore up-to-date process improvement tools and methodologies to continually improve their civil service. Top-level management may view ISO 9001 as a guide in strategy formulation, prevention of non-conformance and a catalyst for change rather than a separate project in compliance to government mandates.

Policy makers in the country may be enjoined to device a mechanism such as developing Implementing Rules and Regulations pertaining to the released Executive Order 605 Series of 2007 to determine the effectiveness of implementing the established QMS and within ISO 9001 certified government firms in the Philippines and the alignment of organizational performance measures. Managers and top management are encouraged to gain high level of understanding on the ISO 9001 standard requirements and design an implementation plan that best suit their organization and even the industry that they are operating in the verge of integrating their current management systems towards achieving organizational performance:

Future researchers may investigate the applicability of this study on either private organizations or on different type of industry whether private or government organizations basically adopting the same construct and modifying instrument applicable to that specific locale of future studies.

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