

A MODEL TO DEVELOPMENT THE DISTRIBUTION OF SUPPLY INVENTORY UNIT USING TOTAL QUALITY MANAGEMENT: FACULTY OF SCIENCE AND TECHNOLOGY.

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ABSTRACT

This research aims to investigate the performance of service and management in the Distribution of Supply Inventory Unit of Faculty of Science and Technology, Suan Sunandha Rajabhat University. Total Quality Management (TQM) practices and strategies were defined to establish and deliver high-quality service and management. This study uses three groups of a sample that consist of the distribution of supply inventory unit staff, laboratory and the Committee for Procurement-Distribution and services. The result showed the high performance of service management and satisfied with the technique. Therefore, TQM is a good technique that can be used to the part of good management in the Distribution of Supply Inventory Units and Educational institutions.

Keywords: TQM, Distribution of Supply Inventory Unit

INTRODUCTION

Nowadays, the management system innovation has been used in the organization for the efficiency and quality of the organization. Total Quality Management (TQM) is a popular technique for organization-wide quality management. The activity in which all departments are conduct of the organization participate in strengthening and providing. It can apply to operate the entire organization with systematically, directly and indirectly that focusing on the importance of clients and systematic work processes. This technique is also covered in principles and continuous operations to improve quality and create satisfaction for clients [1]. The concept of detail as shown in figure 1.

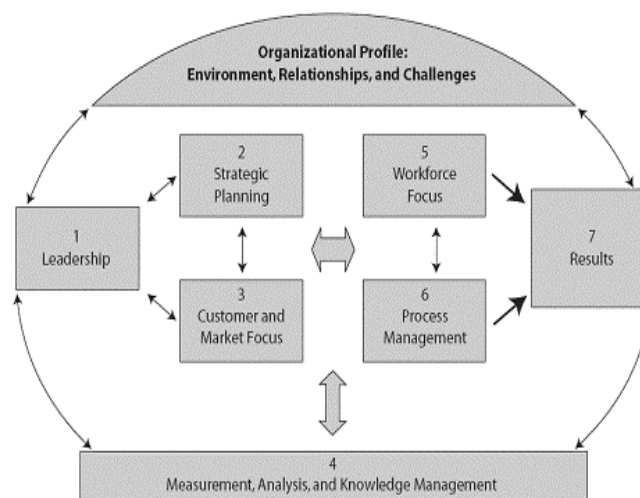


Figure 1. Baldrige Criteria for Performance Excellence [2].

In recent year, TQM was used by the government to set the guidelines for development and reform of the government administration system such as The United States National Quality Award also called “MBNQA: Malcolm Baldrige National Quality Award”. They applied to use for development in the part of government agencies, ministries, departments, and universities [3]. At the same time, TQM has used in the academic or education that used to improve the faculty's administration for more efficient, convenient, and fast. The goal of their works is to decrease the time service, cost which will affect to more satisfied in the awakening and meaningful in all Organization. They also proposed a guideline for the practice of quality management throughout the organization, systematic and disciplined for error prevention. All of the guideline is focused on creating value in every step of the work and how to make it an important factor in achieving success [4]. Besides, TQM procurement management is necessary and important because it is a job with many rules and regulations that professionals must practice correctly, therefore, every institution must have a staff to manage, which is called procurement officer, is responsible for the procurement of various parcels. Must be procured and worthwhile [5]. Procurement and Supply is a very important factor in management because it is a service for various departments in the University able to work to achieve objectives supplies in the inventory management system, it will affect the whole campus administration. The authority must have knowledge and understanding of the regulations of the Ministry of Finance to able to procure the supplies with the University conveniently fast and accurate following the procurement practice guidelines [6]. In addition, Jirarat Teeravarap et al. [7] proposed the relationship model and supporting activities of JIT, TQM and TPM that experiment with the of 30 people sample who work in the companies. The result shows the relationship model needed to be adjusted. JIT becomes to the last to obtain while Kanban remains the activity associated. QC tools are the activities of TQM, and Poke-Yoke that refer to visual control are the activities of TPM. The foundations become 5S, preventive maintenance, and Kaizen, employing JIT, TQM, and TPM in Thailand.

In this work, the author was designing a model technique of TQM to use in the supply inventory unit, Faculty of Science and Technology, Suan Sunandha Rajabhat University (SSRU) for support of the planned activities in academic with year by year. SSRU is a government university that received the main budgets from government to arrange teaching and learning in bachelor degree and master degree. Most of the process was followed the role of procurement support to planned of all activities. Therefore, in this work was focused on the importance of developing and distributing in the Supply Inventory unit model that is the regulatory rules of this the university and the Ministry of Finance. The goal of this work will be beneficial to the highest quality of teaching and learning in faculty and student that is prototype for another department in the university.

OBJECTIVES

The purposes of this research were: 1) to study the components and of the total quality management in the supply inventory department of Faculty of Science and Technology, 2) to determine the knowledge and understanding in TQM of the supply inventory department staff, 3) to develop the TQM model in the supply inventory department of Faculty of Science and Technology, Suan Sunandha Rajabhat University.

METHODOLOGY

This study is a TQM model to develop the distribution of Supply Inventory units as follows.

3.1 This study uses three groups of a sample that consist of a staff of the laboratory, the procurement and supply department and executives.

3.2 This work was divided the tool into 2 categories: 1) Data collecting is using the meeting minutes and check sheet and 2) the tool design, database the distribution of supply inventory is using the brainstorming method and the Quality Work Procedure (QWP).

3.3 In this paper using the 5W1H method to determine the steps for data collection.

DATA ANALYSIS

In this research, data analyses divide into 2 types as follows.

4.1 Quantitative data analysis: used to investigate the problem, status, issues and satisfy of the samples.

4.2 Qualitative data synthesis: used to investigate the rules and regulations of the public procurement and supply management, the working manual of procurement management, brainstorming method and questionnaire [8].

RESULTS

In this research, the design operation processes of the distribution of supply inventory unit of Faculty of Science and Technology SSRU. The total quality management (TQM) was applied to conduct in this work that divide in 6 steps as follows.

Step 1: Researcher team studies about a rule, regularity, and distribution process the Public Procurement and Supply Management Act, 2017 that give force to the government agencies. Propose executive approve to conduct Routine to Research (R2R) in 2019.

Step 2: Researcher team studies the Public Procurement and Supply Management Act, 2017

Step 3: Find client's needs.

Table 1. Summary of client's needs and suggestion

General characteristic	Suggestions for improvement	Frequency (Time)	Ranking
1) The distribution of Supply Inventory unit.	Notify the client clearly in accordance with the rules.	5	2
2) Proposal for management to approve the distribution of inventory units	The details are the consistent according to the asset register.	3	3
3) The distribution of the supply inventory unit.	Clearly notify the location of the position.	3	1
4) The distribution report of the Supply Inventory unit.	Annual inspection reports in with the consistent according to the asset register.	2	4

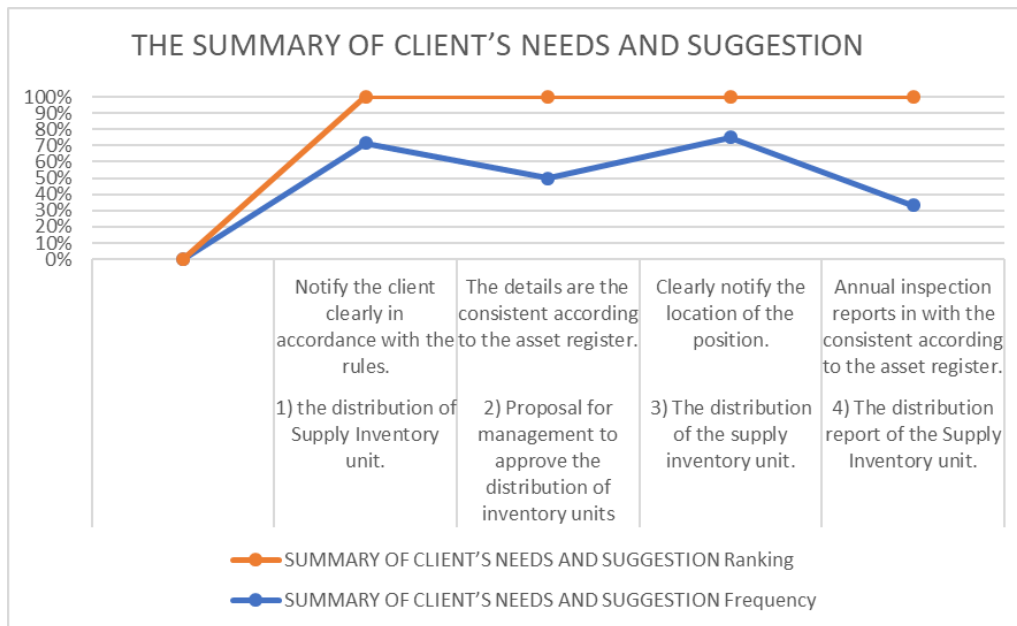


Figure 2. Show the summary of client's needs and suggestion.

Step 4: this step use to set objectives of an auditing model the distribution of the supply inventory unit. The author studies of equipment management system and doing the process design team of the annual package inspection report. The dean of the Faculty of Science and Technology was participated in determining the goal of the process improvement and give the suggestions for improvement of the clients with follow by the questionnaire results. Therefore, the objective of improving is the significant key point of process service.

Step 5: to examination of the form of the annual inventory audit report that is followed of the requirements of the Ministry of Finance. It's done both before and after the adjustment according to the newly designed process.

Step 6: to conduct experiments in the department to customers related to parcels by requiring the person responsible to assess the new process. It is appropriate to carry out the objectives of improving the warehouse management system with a new design method [9].

CONCLUSION

This research results as follows. The researcher as in the staff of supplies department Dean's office Faculty of Science and Technology, Suan Sunandha Rajabhat University has designed forms to support the service by brainstorming. The process is as follows: Step 1: To study the distribution process regarding the process of the annual inspection report. Step 2 to clarify the objective is to clarify and create knowledge and regulations of the Ministry of Finance. Step 3: Determine the need for clients. Step 4: Set objectives and the goal of the inspection model to meet the needs of the clients is to let the clients know the practices of the parcel distribution accurately according to the package management regulations, to allow customers to report annual inventory unit and the procurement officer have reported annual inventory quickly correct by the account control register. Step 5 Check the form report of the annual inventory unit requested data collection annual inspection report, step 6, trial operation in the agency for service recipients related to supplies distribution. The results show the high performance of service and quality of management in supply inventory unit that can be used to apply this model in another department of the University.

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