

CHAPTER ONE

INTRODUCTION

1.0 Introduction

1.1 Introduction of Quality Environment (5S) Practices

The "Look East Policy", introduced in 1982, was intended to provide a new role model for performance and behaviour. The impressive development of resource-scarce countries like Japan and Korea, with its emphasis on work ethics and high productivity, was seen as a good standard for the Malaysians to emulate, particularly as it was in line with their cultural values. Total Quality Management (TQM) has been introduced to focus on the need for organization-wide efforts to implement quality improvement programmes. Quality Environment (5S) is one of the TQM principles that brings a healthy, comfortable and productive life for everyone at work. This is fundamental to productivity improvement of Quality Management System (QMS). When implemented successfully in a company, 5S will bring about amazing changes. Quality Environment practices use 5S Concept as tools towards achieving systematic organization, productive environment, and standardization in the workplace. 5S is an acronym for five Japanese words that are Seiri, Seiton, Seiso, Seiketsu and Shitsuke. By implementing first 3S (Seiri, Seiton and Seiso) all unnecessary items are able to be removed from the workplace, only necessary items are conveniently located near users, machines and equipment are kept clean and shiny. The driving force for 5S program comes from people. In this respect, Shitsuke is critical to its success. Shitsuke is to train people accordingly so that they will follow good habit.

Masaaki Imai in his book *Gemba Kaizen*, has elaborated, "As a general rule of thumb, introducing good workplace organization reduces process defects by 50%." This is why 5S is so important to companies to achieve overall lean production system. Here are some explanations about 5S.

- i) *Sort (Seiri)*. The first step requires employees to sort and systematically discard items that are not needed in the workplace. Red tag strategy commonly employed in order to help company eliminate unnecessary items. Sorting is an excellent technique to transform a cluttered workplace layout into an effective area to improve efficiency and safety.
- ii) *Set in order (Seiton)*. Employee will organize and arrange necessary item in a neat and systematic manner so that they can be easily retrieved for use and to return after use. The second S reflects a very popular saying “a place for everything and everything in its place”. It emphasises safety, efficiency and effective storage and consequently improves the appearance of the workplace. The main benefit is the searching time will be reduced and there is no human energy waste or excess inventory.
- iii) *Shine (Seiso)*. It refers to clean and inspects the workplace thoroughly so that there is no dirt on the floor, machinery and equipment. This step emphasises on cleanliness in order to ensure a more comfortable and safer workplace, as well as better visibility, which reduces retrieval time and achieves higher quality work, product or services.
- iv) *Standardize (Seiketsu)*. Employee has to maintain a high standard of organization by keeping everything clean and orderly at all times. It can be achieved by establishing standard procedures in order to determine the best practices and at the same time ensuring everyone carries out their individual activity in the workplace.
- v) *Sustain (Shitsuke)*. The last step is to train people to practise the 5S system continuously so that it becomes habitual and ingrained in the culture of organization. Self-discipline is required to maintain consistency of standards of quality, safety and cleanliness.

(MPC, 2010)

1.2 5S Implementation

The 5S approach is a simple and systematic methodology which can be introduced and implemented in any size and type of organization. To start 5S implementation, each phase must be thoroughly analysed and addressed using PDCA Cycle. There are 4 phases in Roadmap Towards 5S Implementation. Phase 1 and 2 are the enablers, and phase 3 and 4 are the actual result achieved by organizations.

Phase 1: Planning (Set-up goal, form of 5S Council, training, set-up zones, action plan)

Phase 2: Do (Implement Seiri, Sieton, Seiso, Seiketsu and Shitsuke)

Phase 3: Checking (Internal Audit of 5S and 5S Certification)

Phase 4: Action (KPI's for Continual Improvement)

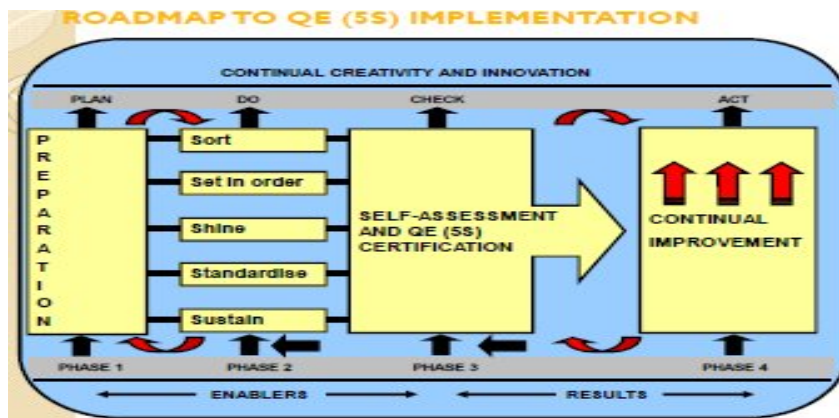


Figure 1.1: Roadmap to Quality Environment (5S) Implementation

(MPC, 2010)

1.3 Internal Audit of 5S Quality

5S Practice is a concept which can be applied in the workplace by workers. It creates more conducive, clean and tidy workplace. If all workers treat 5S Practice as a daily activity, works definitely become faster and easier. A major attraction of 5S is that it does not require capital investment. The heart of the concept is the belief that positive change occurs through investing in people “with every pair of hands comes a free brain”. Therefore, implementation, though not cost-free, can be a minimal cost investment. This makes 5S Practice accessible and achievable for all types of organisations. The implementation and practices of 5S Practice contribute towards increasing company’s productivity and quality. A successful 5S Practice programme will contribute to a change in culture as well as a change in processes and work practice.

In sustaining 5S Practice as work culture, the organisation requires practical initiative to move its employees. In addition to promotion and training, audit activity is vital in measuring 5S Practice progress. Corrective action and improvement can be done after internal audit has been completed. This method will assist 5S Practice to be implemented at all time.

Internal audit of Quality Environment (5S) also known as internal audit of 5S Quality (IAQ) had been introduced to ensure the organization can assess its strength as well as the areas for improvement and where the organization stand in the 5S movement. 5S internal auditors are from the organization that will be in the best position to deal with 5S self-assessment. Organizations that have successful 5S activities can always measure their performance through weekly or monthly audit using 5S checklist, audit summary sheet and 3S improvement stickers. Results of the audit must be communicated and

displayed at the 5S Corner of every department. This creates an atmosphere of friendly competition and will help to instil pride in the teams.

This evaluation or assessment as well as competition must be linked with a reward system. For example, most successful organizations offer monthly rewards for the winning teams in the various 5S categories. IAQ also considered as a basis for 5S Certification due to the main purpose of audit is to ensure the 5S system continuously implemented in organization.

1.4 5S Certification

In Malaysia, the awareness of 5S as an important element of competitiveness is increasing. Many organizations have successfully demonstrated that they have developed a management system based on 5S implementation, and the number of certified organizations is on the rise. The Quality Environment (5S) Certification, introduced by Malaysia Productivity Corporation (MPC) is aimed at developing and sustaining the productivity culture through a continual process for competitiveness. Achieving the certification is a public declaration of commitment to higher quality culture in order to meet various customer needs. Table 1.1 shows number of companies that have obtained 5S certification by sectors from year 2000 to 2011.

Sectors	Manufacturing	SME	Services	MNC
No. of Companies	39	91	250	12
Total	392			

Table 1.1: Number of 5S Certified Company

(MPC, 2011)

The IAQ and 5S Certification naturally drives the organization goal to continually improve on quality and cost effectiveness of providing the product or services through systematic guide using Key Performance Indicator (KPIs). KPIs are qualifiable measurement range of operation factors which underline the work process itself and which determines the overall level of cost and quality. Factors such as safety, morale, preventive maintenance, set-up time, and cycle time planning have a huge impact on performance. Although the work process is the combination of material, machinery, equipment and human know-how, the way in which these resources are used is important as the actual quantities used.

In employing the 5S management techniques, each work group need to set their own KPIs to enable them to monitor their own progress. The KPIs commonly used are productivity, quality, cost, delivery time, safety and morale that would indirectly contributes to organizations performance as a whole.

1.5 Problem Statements

Internal audit of 5S Quality (IAQ) has been introduced in order to ensure the practices among employees continuously implemented throughout organization. Management of 5S Certified companies always concern about the impact on IAQ towards company performance especially at operational level. They believe that IAQ activities can lead to number of improvement activities such as cost reductions, waste elimination and safety improvement, however, how far IAQ contribute impact to company operational performance (productivity and quality as a whole) is still questionable.

In a company that obtained 5S certification, the internal audit teams will be responsible to monitor the 5S practices in organization as well as ascertain that the practices can be sustained and improved from time to time. The major challenge that faced by them is the adequate number of resources in performing the audit task. The frequency of IAQ conducted by companies are solely dependant to management requirement as well as number of resources (auditor, time, budget) available. Some organizations allows IAQ be performed monthly or once in the two months. The dynamic of internal audit approach due to management intention, would influence of internal audit of 5S quality effectiveness.

Internal Auditor will be using 5S Standards as guidelines while conducting IAQ activities. 5S Standards highlights six main criteria which are 5S main requirements and documentations, Office Area, Production Area, Warehouse/ Workshop/ Store Area, Public Area and Environment Area. The approach of using 5S Standards might be different due to knowledge, experience, skills, size, culture and sectors of organizations. It would give inconsistent opinions and would impact internal audit activities.

IAQ report is a main output for the 5S activities. The good audit findings lead to major improvement such as cost saving. However, the standards reporting of audit findings are different based on company and auditor preferences. The dynamic types of reporting would influence the effectiveness of IAQ activities. Therefore, based on the problem discussed, the research intends to look in depth into the relationship between the internal audit of 5S quality effectiveness and company operational performance.

1.6 Research Objectives

The objective of the study is to gather sufficient data on the internal auditor opinions and perceptions towards the organizational factors that influencing IAQ in 5S certified company. This study focuses on the following perspectives:

1. To identify the extent of resources involved in internal audit of 5S Quality.
2. To determine the auditor level of competencies in internal audit of 5S Quality.
3. To evaluate the quality of audit report produced in internal audit of 5S Quality.
4. To measure the relationship between internal audit of 5S Quality Effectiveness and company operational performance.

1.7 Research Questions

This study mainly focuses on four research questions:

1. Do organizations have adequate number of resources to perform the internal audit of 5S Quality?
2. Does internal auditor have enough competencies to perform the internal audit of 5S Quality?
3. Do organizations have standard guideline in producing internal audit of 5S Quality report?
4. How internal audit of 5S Quality effectiveness influence company operational performance?

1.8 Scope of Study

This study aims to look at the internal audit process currently being implemented at companies that obtained 5S Certification with an attempt to determine internal auditor perception on organizational factors influencing internal audit of quality effectiveness and company operational performance. Head of internal audit and internal auditor perceptions from selected company are included.

1.9 Significance of Study

The research findings will assist internal auditor of 5S Quality to understand the factors that contributes to the effectiveness of internal auditing in their organizations as a whole.

In summary the significance of the study are:

- i. The study will identify the importance of resources in internal audit of 5S Quality.
- ii. The study will determine the competencies level of 5S internal auditor.
- iii. The study will formulate standard guideline in internal audit of 5S Quality report.
- iv. The study will measure the relationship between internal audit of 5S Quality effectiveness and company operational performance.

Thus, the research has been structured as follows; **Chapter 1** presents the introduction, problem statements, research objectives, research questions, scope and significance of the study. The overview of the literature review on quality audit, organizational performance, internal audit of quality and organizational performance, audit resource, auditor competencies and audit report are provided by **Chapter 2** of the research.

The **Chapter 3** presents a description of the research's framework and methodology, including details of population, sample size, sample selections, data collection, structure of questionnaire while the research results are discussed thoroughly in **Chapter 4**. Finally, the conclusion of the research, knowledge contribution, research limitation, recommendations and future research are discussed in **Chapter 5**.