

# **Theoretical Review for Implementation of Japanese 5S Technique in Service Organizations, and the Possibility to Apply it in Syrian Service Organizations**

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**Abstract:** *This study aimed to carry out a theoretical review of the most important literature related to workplace organization technique (5S) and to explore its benefits and implementation on service organizations. This technique, which appeared first in Japan, has been applied widely on different types of organizations in a large number of countries. To achieve the goal of the study it was followed the “basic study” method, where the data that related to (5s) technique were collected with taking advantage of previous studies and their results, The study finds many of the results including: (5s) technique is easy and simple tool, and can be applied in various types of organizations, and there are a lot of benefits resulting from the successful application of (5s) technique, and based on these results the study put several suggestions including the use of benchmarking style by Syrian service organizations to identify the experiences of implementation the (5s) technique, and Syrian service organizations (especially healthcare organizations) should apply this technique, the study suggested that further future studies on the (5s) technique should be done by the Syrian researchers.*

**Keywords:** *Benchmarking, Continuous improvement, Syrian Service Organizations, Total Quality, Workplace Organization, 5s.*

## **I. Introduction**

It is known that part of the economy that produces intangible products called the services sector, and there are those who call it “the third sector”, which comes after agriculture and manufacturing sectors, and the service sector includes a wide range of activities such as health care, tourism, trade, education, engineering, communication, transportation, information technology, banking and insurance, and the government in any country is aware of the importance of promoting growth in the services sector because of its importance in the national economy.

In the last two decades, different types of continuous improvement techniques has appeared, the most famous of these techniques is the workplace organization technique (5s), although this technique applied headed initially towards the manufacturing organization (like Toyota), but it has also made its way toward service organizations, where this technique appeared in the early eighties of the last century by a Japanese researcher (Takashi Osada), an adviser in the industrial engineering and quality control, and published it in (1991) in his book (The 5s's: Five Keys to a Total Quality Environment), and the Japanese researcher (Hiroyuki Hirano) completed (Osada) working (1995), then the foreign studies followed one another in discussing this technique and its applications and benefits in different types of organizations.

Based on the foregoing, we will in this study work on a theoretical review on (5s) technique and its benefits, and the most important foreign studies on the application of this technique, with focusing on the service sector organizations, and in the light of this theoretical review we will put the

results of the study, based on the results we will put some of the suggestions to the Syrian service organizations and academic researchers.

## **II. Methodological Framework of the Study**

### **2.1. Study Problem:**

The problem of the study is stem mainly from the non-application of the workplace organization technique (5s) by Syrian service organizations, as well as Arabic studies failed to follow up the application of this technique in service organizations, where some Arab studies (especially Iraqi) has recently appeared and reported (5s) technique -very briefly- as one of the lean manufacturing philosophy tools, all of these studies have been applying in manufacturing organizations, and the study problem can be expressed through the following questions:

- a) What is the workplace organization technique (5s), and what are the most important benefits of (5s).
- b) What are the most important foreign studies related to implementation of (5s) technique in service organizations.
- c) Can the Syrian service organizations apply (5s) technique and take advantage of it.

### **2.2. Objectives of the study:**

The main objective of the study is to carry out a theoretical review of the most important foreign studies that related to (5s) technique and its benefits, with a focus on service organizations. Overall, an objective of the study lies in the answer to the questions of the study through the following:

- a) To recognize the workplace organization technique (5s) and its most important benefits.
- b) To view the most important foreign studies related to (5s) technique and its benefits, with a focus on service organizations.
- c) To extract the results of previous studies and relied upon to develop suggestions to the Syrian service organizations and academic researchers regarding the starting applied the (5s) technique and the possibility to take advantage from it.

### **2.3. Importance of the study:**

**Theoretical importance:** This study considered as "Basic study" in Arabic regions which aims to increase the scientific knowledge, thus, the theoretical importance exceed the practical importance, as this study will basically aiming to increase the scientific knowledge in the study subject rather than resolving an instantaneous problems in the organizations.

The theoretical importance of the study is stem from the dealing with one of the techniques that help to excellence and continuous improvement in various types of organizations, the fact is that (5s) technique is one of the most important contemporary techniques that has been focusing by the foreign studies, while there is a clear lack of local studies as it regards the application of this technique in the service organizations, so this study aims to develop a basis that researchers can be relied upon to conduct future studies on the (5s) technique in service organizations.

**Applied importance:** This study is providing many of the suggestions that we can depending on it to implementation the (5s) technique and take advantage of it in the Syrian service organizations.

### **2.4. Study Methodology:**

The researcher relied on "literature review" method, in this type of studies there will be no field procedures, where there will be conducting a theoretical review of previous studies and their results in order to formulate a theoretical framework for (5s) technique and its benefits, and then

reached for a set of suggestions for Syrian academic researchers and Syrian service organizations, in this study we put methodology framework, and then the theoretical framework (concepts and theories related...), then we placed previous studies, after which the results and suggestions be putted.

### III. Theoretical Framework of the Study

#### 3.1. Workplace organization technique (5s):

This technique has been practiced in Japan for long time, when the original concept was developed by (Takashi Osada) in the early 1980s, it has been widely practiced in many Japanese firms, both at home and abroad[1], also Japanese researcher (Hiroyuki Hirano) continued the development of this technique in the 1990s, (5s) focused on fostering and sustaining high quality housekeeping, (5s) is the beginning of a productive life for everyone, and is fundamental to productivity improvement[2], this technique engages improvement activities in any environment, including homes, schools, and workplaces[3], (Ho and Cicmil 1996) indicate that if you implement the (5s) at your home first, you will see the real benefit, once you gain experience and become aware of the usefulness of the 5s, you can start implementing it at your workplace, in turn, you will benefit from the improvement in your workplace environment[4], there are many examples of successful implementation of some principles of the (5s), especially in the service sector organizations, such as fast-food restaurants, supermarkets, hotels, libraries, and leisure centers[1], and the (5s) implementation requires commitment from both the top management and everyone in the organization[5].

The name of the technique arises from five Japanese words that constitute the implementation phases, and several English translations of these Japanese words have been used in the literature by different authors as shown in the following table:

**Table.1**

Japanese word	English translation
Seiri	Structures, Sort, Sift, Clean up, Clear out.
Seiton	Straighten, Simplify, Set (in order), Configure.
Seiso	Sanitize, Scrub, Shine, Sweep, Clean and check.
Seiketsu	Standardize, Systemize, Conform.
Shitsuke	Self-Discipline, Sustain, Custom and practice.

The source: (Warwood and Knowles 2004) [6].Adapted from researcher.

A review of the literature suggest that it is important to choose words that blend in with the corporate culture but also not to lose sight of the meaning behind the original Japanese words[6].

The researchers chose the English translations, which, if translated into Arabic it will give the best meaning (content) for the steps of Japanese (5s) technique, and we will mention these steps in some detail:

**A. Seiri (Sorting):** This step is meant to separate needed items from unneeded items, then unnecessary items are removed from the work area[7], the defective or rarely used material and equipments in the company cause the demolition of the workplace's order and decrease in the work efficiency[8], this leads to fewer hazards and less clutter to interfere with productive work[9], and when this first step is applied well, the problems and complaints through the work flow will decrease, the communication between the personnel will be simplified, and serious saving will be obtained in the size of the required working environment[8].

**B. Seiton (Set in order):** Also a lot of researchers express this step as (Straighten), this step is meant to put things which are required in specific position, there has to be “A place for everything and everything in its place”[7], the materials should be arranged in a way that they can be reached easily and do not get employee tired, and the purpose of this step is to prevent unnecessary time, mental and physical energy losses[10], (Young 2014) gives an example on that: place high use items in the place with the easiest access and low use items further away, also think about height of shelves, high use items may be better at shoulder level, lower use at feet level, heavy items shouldn't be placed up high or down low if possible[7].

**C. Seiso (Scrub):** Also a lot of researchers express this step as (Shining), this step means cleaning the workplace and check during cleaning, and attention to personal hygiene, cleaning should be a daily activity and the workplace should be cleaned at regular intervals[11], (Ho and Cicmil 1996) indicates that the cleaning should be done by everyone in the organization, the Japanese believe that while they physically clean an area, they are cleaning their minds too[4], which is leading to increase the morals of the workers, (Young 2014) indicates that we had the work environment checked for good air quality, appropriate temperature, humidity and lighting, and the presence of dust or fumes, any problems revealed during this process were handled promptly[7].

(Gurel 2013) indicates that the cleanliness is important for the protection of both human and environment health, and also the physical assets in hotels, thus it generally ranks among the first lines of the expectations of the hotels customers, while increasing the moral of the employees and healthy work environment plays an important role in reducing the maintenance/repair costs and increasing the product quality, the principle issues addressed regarding cleanliness are the work environment, materials and personal hygiene and care, regarding (5s), the cleanliness should not only be addressed for physical appearance but also for safety, the preparation of a good cleaning program is mandatory considering that there are many people such as customers and employees in the hotels, which are a significant part of the services for the customers (foods, beverages, sleeping, etc.) and that many materials are utilized to carry out the services as well as the diversity and size of the places, in addition to this, the applications of various quality systems for food safety such as Environment Management System (EMS), Blue Flag, and HACCP is important as it shows the importance attached to the cleanliness and safety in hotels[10].

(Kaluarachchi 2009) indicates that the (Castle Street) hospital uses some safety measures in the form of safety sign belts (black and yellow strips) at high-risk areas, safety signs, fire extinguishers, concealment of risky pits, removal of dilapidated building and dangerous tools and items that can harm the lives of patients and employees, and development of checklists to avoid mistakes during medical and surgical procedures[12].

**D. Seiketsu (Standardizing):** This step means setting rules and procedures that ensure the preservation of the place clean and tidy, so that this place is comfortable and productive by repeating what is stated in the previous steps[13], Standards should be very communicative, clear and easy to understand[14], and apply everywhere in the organization, everyone knows exactly what his or her responsibilities are[15], and for full application and development of the standards, the participation of all personnel is required[8], the principle in standardizing is about making different work areas with same function look the same[7].

**E. Shitsuke (Self-Discipline):** Also a lot of researchers express this step as (Sustaining), (Ho and Cicmil 1996) indicates that discipline means instilling the ability to do things the way they are supposed to be done, the emphasis here is on creating a workplace with good habits, by teaching everyone what needs to be done, and having everyone practice it, (Ho and Cicmil) differentiates here between traditional discipline and self-discipline, they indicate that self-discipline is important because it reaches beyond discipline, if a person is “disciplined” to do something at one time, there is a chance that he or she may not be disciplined next time, however, self-discipline plane guarantees the

continuity of a daily routine, self-discipline should be encouraged, and employees should develop their own self-discipline framework[4].

(Gurel 2013) indicates to this: it is observed that the main problem originates from discipline in the firms that have failed in the (5s) practices, attention should be paid to promote self-discipline in place of traditional discipline to create quality culture, for that purpose, it is proposed at first the work environment to be open for learning and development, self-discipline is useful for facilitating the adoption of the (5s) by the employees as a concept directing their daily activities, the nature of the hotel services and the intensity of the interaction with the customer cause high uncertainty and coping up with that situation is one of the most important tasks of the managers, the control of the employees is considerable difficult especially in the high interactive processes where uncertainty is more, the employees should assume the tasks such as to detect the possible failures, to solve them, and to carry out the necessary improvements while the process of service continues, for that reason, self-control gains importance for hotel employees, it can be argued that discipline which is shown as the most important component of (5s) is not related in narrow sense to performing works but it refers to self-discipline related to the pursuit of better and continuous improvement of the self [10].

There are researchers who considered the last step of the (5s) technique is the (Sustaining), which are intended to train people to practice (5s) system continuously so that it becomes habitual and ingrained in the culture of the organization[16], it is intended also to maintaining standards and keeping the facility in safe and efficient order day after day, year after year[15], (Patel and Thakkar 2014) indicates to this: People tend to resist change and even the most well-structured (5s) plan will fail if not constantly reinforced, it creates an educating, co-operating, discipline system and inspection for protecting the best present situation[17], (Young 2014) indicates that sustain is a key to success[7].

We note that the meaning and significance behind the last step remains the same, even if the names are different.

### **3.2.The benefits of the workplace organization technique (5s):**

Previous studies have indicated a large number of benefits for the (5s) technique, and the researcher summarized the most important benefits in the following studies:

(Ho and others 1995), (Ho and Cicmil 1996), (Ho 1999), (Warwood and Knowles 2004), (Liu 2006), (Kaluarachchi 2009), (Ablanedo-Rosas and others 2010), (Yadav and others 2011), (Sorooshian and others 2012), (Kumar and Kumar 2012), (Ghodrati and Zulkifli 2013), (Gurel 2013), (Abdul Aziz and others 2014), (Young 2014), (Jimenez and others 2015), (Kendangamuwa and others 2015), (Rai 2016):

- (5s) technique helps to provide an essential total quality environment which is an important base for implementing TQM successfully.
- Increase the safety, cleanliness and organizing in the workplaces, and increase the speed of products and services delivery (reducing customer waiting time for products and services).
- The adoption of the preventive approach to minimize failures and losses, and developed the business approach of the employees in line with all sorts of quality systems.
- Improving the products and services, increasing the overall performance of organizations, and change the prevailing culture to the desired culture.
- Increasing quality and productivity in the workplace, and restore most of the high-value spaces in the workplace.
- Reduce the overall costs (products, services, storage, maintenance, delivery ...etc).
- Strengthening the image of the organization, increase customer satisfaction, and enhance teamwork and social relations.
- Safety at work, avoid errors and accidents, and reduce search time for things.
- Increasing workers skills, and workers will be more creative and innovative.

- Higher employees morals, increase staff loyalty to the organization, and educate employees on positive discipline.

### **3.2. Theoretical review of previous studies:**

The purpose of the theoretical review of previous studies is to reading the theoretical framework for these studies, methodology and results, and take advantage of them in the writing of the theoretical framework of the current study, summarize the most important results of these studies, and then develop appropriate suggestions to the Syrian service organizations and academic researchers.

Since the total number of studies related to (5s) technique that the researcher has reviewed exceeds (80) studies, the researcher will be limited to reviewing the studies that were actually used in writing the body of the current study, where (24) references were used, including one book (Schroeder 2008) and six studies were totally conducted in manufacturing organizations were not included in the following review, and (17) studies have been totally done in service organizations or in both service and manufacturing organizations which they will be reviewed in the following:

**(Ho and others 1995): The Japanese 5-s practice and TQM training:** This study aimed to determine whether the Japanese (5s) practice has a significant contribution to the successful total quality management (TQM) implementation, the researchers applied (Survey) strategy using questionnaire tool that sending to (3000) companies in the UK and (200) companies in Japan, (205) manufacturing and (106) service UK company in addition to (16) Japanese company has responded to the study, the study finds that (5s) provides an essential total quality environment which is an important base for implementation TQM successfully, the study suggested that (TQM) training policy should incorporate the (5s) practice guidelines.[1]

**(Ho and Cicmil 1996): Japanese 5-s practice:** This study aimed to review (5s) technique, its steps and benefits in the organizations, the study used a (case study) strategy in two different organizations.

The first case study conducted at the Standards and Industrial Research Institute of Malaysia (SIRIM), which is government service organization responsible for industrialization programmes in the Malaysian economy, it is one of the largest institutions of this kind in the world, which employs (980) employees in its main office -consisting of (30) building- in various functional centers, this organization encompassing the functions of national standardization, technology transfer, and quality and productivity improvement consultancy, SIRIM has decided to implement (5s) itself in the main office, this was necessary as SIRIM saw its benefits and also wanted to set an example for industries, when the first day of implementing (5s) was over, three lorry-loads of rubbish were thrown out of the (30) blocks of buildings, while continuing to complete the steps of this technique application and achieve good results, there are continuous requests from industries for consultancy service from the SIRIM's industrial extension unit regarding implementation of the (5s), as a result of the high demand for (5s) consultancy service, the unit has been allocated additional human resources to satisfy this need.

The second case study conducted at (Wellex) company in the United States, which is an industrial company specialized in software industry was founded in (1986) and has (300) employees from (30) different countries in the world, where this company in (1991) used the Benchmarking technique to take advantage of the experience of the (Miyoshi Electronic) Japanese company in implementation (5s) technique, after two years of application of (Wellex) company of this technique the company's production rate rose to more than 26%, and the company's sales exceeded (23) million.

The study finds that (5s) technique leads to a lot of benefits to organizations including: The formation of a fundamental base for the application of quality systems such as (ISO9000), increase quality and productivity in the workplace, reduce costs, on-time delivery, increase the security in the workplaces and raise the morals of the staff.[4]

**(Ho 1999): The 5-s auditing:** The study aimed to explain the intricacy of the 5s technique so it can be understood easily and adopted readily by those who may find the tool useful, where the study reviewed a theoretical concepts about 5s technique, also it reviewed the world's first 5s audit checklist which developed by (Ho), and the experience of apply it in (10) companies in Hong Kong, including (6) manufacturing company and (4) service company in the time between 1994 and 1997 in collaborated with "Government Industry Department" in Hong Kong, the study also reviewed the experience of training more than (2500) 5s lead auditors by (HO), the study finds many results including: 5s technique helps everyone in the organization to live a better life, and it is the starting point of any TQM program, and many successful organizations, east or west, have already included some aspects of the 5s technique in their routines without being aware of its existence as a formalized technique. [5]

**(Warwood and Knowles 2004): An investigation into Japanese 5-s practice in UK industry:** The study aimed to assess the popularity of 5-s and its suitability for the future in UK industry, A questionnaire survey was performed on (100) companies in the UK, the objective of the questionnaire were twofold: First, to investigate the impact of Japanese 5-s practice in UK industry and to further this research by finding out which organizations would be prepared to undertake semi-structured interviews, the questionnaire was tested on five organizations before the main survey to ensure the legitimacy of the questions and validity for subsequent analysis, the number of replies to the questionnaire were (39) which included four void responses, the total number of manufacturing organizations which responded were (26) and the service organizations were (9), the total number of organizations currently practicing 5-s were (15) which are (14 manufacturing and one service organizations), where the interview were conducted within the (8) organizations, the study finds many results including: 5-s technique helps to increase safety in the organization, improve the work environment, increase quality and productivity, reduce costs and waste, increase customer satisfaction, and increase workers discipline.[6]

**(Liu 2006): Library as place: Implementation of 5-s system:** The idea of this study is to clarify the importance of "the library as a place" after the emergence of electronic libraries and virtual libraries, this study aimed to share the experience of implementing the (5s) technique in the Hong Kong University Library, and then the study offered how they have been applied this technique in the library in two phases: The first phase involved the application of the first three steps of the (5s) technique, and the second phase included the application of standardization and self-discipline steps, the application process was initially faced some difficulties, including: Lack of interest in the proportion of workers applying this technique, and a different degree of enthusiasm among the sections to the application of this technique, and over time, the number of employees who are committed to application of technique were increasing because of increasing support and motivate by the management of the library, the (5s) technique in library has become mature and sophisticated, the earlier a great welcome from the Trustees of the other libraries who have shown great interest in the possibility of the transfer of the experience of the application of this technique to libraries those responsible for, The study finds that the idea of "library as place" is still valid today, the (5s) technique suggests a framework and provides guidelines for creating and maintaining an inviting, pleasant environment for library staff to work in, and for library patrons to study, learn, think, socialize, and to be inspired in.[18]

**(Kaluarachchi 2009): Successful TQM implementation in Sri Lankan public hospitals:** This study aimed to examines how the TQM implementation efforts of a (Castle Street) hospital were accomplished alongside an attempt to change its culture, the (Castle Street) hospital for women is a public maternity hospital in Sri Lanka, it was established in (1950) and functions as the largest maternity hospital in Sri Lanka in (2009) with a capacity of (846) employees and (450) beds, it provides maternal, gynecological, and neonatal care services, the number of deliveries every year ranges between (16000) and (18000) with an average of (27%) cesarean deliveries, the hospital started applying (5s) technique in the year (2000), the study used democratic leadership style and communication of the CEO as intermediating factors between the 5s-based TQM activities and the

change in the culture in the hospital, the study finds that the change of culture at the hospital has occurred as a result of its Japanese 5s-based TQM activities that were implemented in 2000, the key benefits that hospital gained through the implementation of (5s) technique were: Improving its service outcome/performance over time, less waste, less waiting time, less human error, less accident, and reduce deaths and disabilities of patients, the hospital has awarded several quality awards by the Ministry of Health of Sri Lanka and the Japanese Agency for international cooperation such as (Akimoto) award for the best service organization in Sri Lanka applied (5s) technique in 2001, the study suggested that there is a need to conduct future studies on this subject, including comparative studies which include private hospitals in Sri Lanka.[12]

**(Ablanedo-Rosas and others 2010): Quality improvement supported by the 5s, an empirical case study of Mexican organization:** This study aimed to understanding the experiences of Mexican organizations in the application of (5s) technique, and the challenges of the application of this technique, the study used questionnaire and interview tools in the (20) Mexican organizations, which are (16) manufacturing organizations (13 have a quality department and 11 of them applied 5s technique) and (4) services organizations (there are no quality department in any of them and 3 of them applied 5s technique), the study finds many results including: The practice of (5s) technique results in higher quality and productivity, lower costs, faster delivery, safer workplace, and higher employees morale, the study suggested many suggestions which include: The quality philosophy should be included in the organizational philosophy, and the (5s) practice is not subdued to the quality department, the study also suggested that additional studies are conducted within different cultures.[3]

**(Yadav and others 2011): Implementation of 5s in banks:** The aim of this study was to gain a deeper understanding on how to develop an environment that only includes the required items, effective working environment and eliminate hidden waste to improve the levels of safety and quality at the workplace, and reduce the costs, the study was conducted on a sample of (40) employees in the (Barado) bank in India, the study used descriptive approach mainly with questionnaire tool, the study finds several results, including: (5s) technique implementation leads to increased productivity and quality, and reduce costs, the study made general suggestions, including: Containers, boxes, equipments and materials must be stored in a manner that prevents objects from falling, all combustible materials and flammable liquids must be stored in accordance with safety standards, and smoking rules must be enforced throughout the company premises.[2]

**(Sorooshian and others 2012): Case report: Experience of 5s implementation:** The study aimed to view the status of (5s) technique application in (Milad) company, which is a small-sized company fully owned by the privet sector, with (15) employees, this company works in marketing service and its main activity is to act as a business consultant industry, the study finds after implementation (5s) technique in the company that (5s) technique easy and simple and can be implemented at all levels, (5s) will foster teamwork discipline and will increase the sense of responsibility, (5s) will create productive work environments and clean and secure the delivery system towards a world-class, the study made general recommendations, including: To make the (5s) technique more influential the top management are required to fully support this activity all through the company, the company should institute a system of benchmarking with other companies which are more successful with implementing (5s) technique, and the involvement of all employees in the department in the (5s) implementation program.[19]

**(Kumar and Kumar 2012): Steps for implementation of 5s:** This is a theoretical study that has reviewed the steps that organizations should follow to implement 5s technique, which will help to achieve benefits for these organizations. The study explained the concept of 5s technique, the benefits of applying it, the method of applying the technique using the quality cycle (PDCA), and then developed basic guidelines for the application of each step of the 5s.[16]

**(Ghodrati and Zulkifli 2013): The impact of 5s implementation on industrial organizations performance:** The study aimed to determine performance factors and characteristics in



industrial organizations and identifying the effectiveness of (5s) implementation on organizational performance as well, the study used surveying method and data collection is done by distributing questionnaire among five Malaysian organizations which have implemented (5s) technique, the target organizations were chosen from different types (3 manufacturing and 2 services organizations), the organizations performance was measure before and after application of (5s) technique, the results show that (5s) is an effective tool for improvement of organizational performance, and service organizations have achieved high performance results in comparison with the manufacturing organizations, the study suggested doing further studies on the relationship between (5s) technique and the performance of the organizations.[20]

**(Gurel 2013): A conceptual evaluation of 5s model in hotels:** This study is a theoretical study aimed to highlight the potential for application of (5s) technique in hotels, the study considered that each of the (5s) components is extreme importance for the service quality and they are applied independent of each other, and hotels experiences on independent and/or limited applications of (5s) components will be considerably useful in transforming them into a business model, the study also suggested that the components of (5s) are simple, easy and valid for all employees in the various sections of the organization, and the application of (5s) technique can make the work environment in the hotel safe, clean, and organized, this theoretical study discussed the possibility of application (5s) elements without any specific field study, the study suggested to do more field studies on (5s) applications in hotels.[10]

**(Abdul Aziz and others 2014): Survey to see the impact of 5s implementation among staff of Kpj Seremban specialist hospital, Malaysia:** The study aimed to find out the reality of the studied hospital before and after the implementation of (5s) technique, especially in terms of the productivity and quality of the workplace and its outputs, as well as the morale of the staff and the extent of their knowledge and understanding of the (5s) technique, where the questionnaire was distributed to (330) employees in the hospital from different functional centers, retrieved (234) questionnaire valid for statistical analysis, the study finds that the (5s) technique implementation has led to improved productivity and the quality of the workplace, as well as raise the morale of employees and increase their interest and commitment to work.[21]

**(Young 2014): The use of 5s in healthcare services: a literature review:** The aim of this study was to review the use of (5s) technique in healthcare services, where it reviewed several studies on the use of (5s) technique within the various areas of health care, the study finds that (5s) technique can be applied to healthcare services with beneficial effects such as: cleaner, organized, efficient workplaces for enhanced safety and increased productivity, reduction of inventory and supply costs and recapturing of valuable spaces and minimizing overhead costs, this study suggested that the last step of the (5s) technique which is “Sustain” is the key to success.[7]

**(Jimenez and others 2015): 5s methodology implementation in the laboratories of an industrial engineering university school:** The study aimed to identify the experiences of implementation (5s) technique to improve working and safety in the university engineering laboratories in Madrid, Spain, a working model was defined to create a (5s) structure and an implementation process has been established, after the implementation of the (5s) technique, the study finds many results, including: Increased the commitment of all participants, professors, staff and students, decreased the number of faults and accidents, learning and control and maintenance of the involved resource activities are performed in less time and with a considerable decrease in the cost, (5s) technique provides a basis to create an organization culture and start working with continuous improvement, improved of the working environment and an increased in the motivation of the staff involved, increased available space allocation for equipment by 25%, and increased the interest of workers to safety in the workplace.[22]

**(Kendangamuwa and others 2015): Factors contributing to the sustainability of 5s programmes in government hospitals in regional director of health services area Kurunegala:**

This study aimed to find out the factors contributing to sustainability of (5s) programmes in government hospitals in RDHS area Kurunegala, the study was descriptive cross sectional with two components: First component was to identify the (5s) sustaining hospitals from not sustaining hospitals by validated evaluation sheet (Akimoto's 5s evaluation sheet), second component was to determine the factors contributing to sustainability of (5s) programmes in selected study setting, self-administrated questionnaire was used for this purpose, total study population was (543) employees at (10) hospitals where it had selected a sample of (422) employees where (375) of them were responded to the questionnaire, ten factors were studied as contributing factors for the (5s) sustainability, those ten factors were top management commitment, leadership of the organization, commitment of middle and frontline managers, commitment and satisfaction of employees, training and changing attitude of employees, motivation of employees, organizational culture, group cohesiveness, community participation and customer satisfaction, the study finds that the implemented (5s) programmes were sustaining in 8 out of 10 hospitals, and the study finds that organizational leadership, customer satisfaction, community participation and organizational culture were the major contributing factors for sustainability of (5s) programmes in hospitals, the study suggested the following: Leadership of all the government hospitals should be strength in every aspect in the organization, more (5s) training programmes and attitude changing programmes should be carried out, and to carry out further studies on each factor from above in detail.[23]

**(Rai 2016): Effectiveness of 5s implementation on organizations performance:** The study aimed to identify the effectiveness of (5s) implementation on organizational as well employees performance and their attitude towards (5s), the survey method was used and data collection is done by distributing questionnaire tool on (450) workers in (23) organizations that applied (5s) technique, the target organizations was chosen from both the service and manufacturing, the study finds that (5s) is an effective tools for improvement of organizational performance, regardless of organization type, size, its production or its service, consequently, (5s) technique would strongly support the objectives of organization to achieve continuous improvement and higher performance.[24]

#### **IV. Results, Suggestions and Future Researches**

After the theoretical review of previous studies on (5s) technique, the current study finds many of the results and suggestions, which are:

##### **4.1. Results:**

- Previous studies have indicated that (5s) technique is the beginning of a productive life for everyone, it is an easy and simple tool, and its application requires commitment by all management levels in the organization.
- (5s) technique can be applied not only to manufacturing organizations, but also applied in services organizations successfully. Examples of that in previous studies include: (The Castle Street) which is Sri Lankan hospital, (SIRIM) which is Malaysian service institution, (Barado) which is Indian Bank, (Milad) which is Malaysian Service Company, Hong Kong university library, and hotels.
- (5s) technique can be applied on public or private organizations. Examples of that in previous studies include: (The Castle Street) which is Sri Lankan governmental hospital, (SIRIM) which is Malaysian governmental institution, (Wellex) which is American private company, and (Milad) which is Malaysian private company.
- (5s) technique can be applied on small or medium or large-sized organizations. Examples of that in previous studies include: (Milad) which employs (15) employees, (Wellex) which employs (300) employees, (The Castle Street) hospital which employs (846) employees, and (SIRIM) institution which employs (980) employees.
- All Previous studies agreed that there are a lot of benefits resulting from the successful application of (5s) technique, and these benefits include: work environment, employees,

customers, products and services, cost, delivery, maintenance, overall performance, and the culture of the organization.

#### **4.2. Suggestions:**

Based on the previous results, on the ground that the Syrian service organizations –In principle – eligible to apply (5s) technique and take advantage from it, the current study suggests on the Syrian service organizations, the following:

- The use of benchmarking tool to learn about the experiences of similar international organizations that have succeeded in implementation (5s) technique.
- The development of programs and timetables to start applying the (5s) technique, and the declaration of these programs to all employees in organizations.
- Conducting training courses on the (5s) technique application for all employees in the organizations, with the need to provide support and motivation by the leaders of these organizations.
- Emphasis on the application of this technique and commitment in it in all organizations that provide health care services (hospitals, clinics, etc.), because of the sensitivity of the services provided by these organizations on humans' health and life.

#### **4.3. Future researches:**

This study suggests that further future field studies on (5s) technique should be done by the Syrian researchers (in organizations that can be applied it), and the relationship of this technique with the various variables studied, such as: performance, quality, and work environment.

## **V. Acknowledgements**

I am grateful for the anonymous reviewers and the editor for their efforts. I also acknowledge Mr. Bassel Farhan, Mr. Ahmad Farhan and Dr. Tharwat Abdo for their fully supporting of this work. My heart-felt thanks to my family who have helped me for the completion of this work.

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