

A Study on the Effectiveness and Implementation of 5s at Magnum Clothing Pvt Ltd, Chennai

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ABSTRACT

Since many organizations attempt to become the best in their service, a good management system is required and therefore the implementation of 5S is highly recommended. 5S is known as the pillars which refer to sort, set in order, shine, standardize and sustain. Magnum clothing pvt. ltd. is a garment manufacturer with production units and head office in Chennai, India and a satellite design and sales office in London, UK. This paper discusses about the effectiveness of implementation of 5S. A systematic way to solve the research problem is research methodology. The descriptive research design is used for analyzing this research problem. The objective of the research is to increase the productivity of the organization by implementing the 5S. The chi-square analysis is used for finding the significant difference between the observed frequency and expected frequency, here the chi-square is used as the statistical tool for analysis. Suggestions are perfectly made matching the finding from data analysis

Keywords: Seiri, Seiton, Seiso, Seiketsu, Shitsuke

OBJECTIVES OF THE STUDY

PRIMARY OBJECTIVE:

- The primary objective of the study on the effectiveness of implementation of 5S is to increase the productivity of the organization.

SECONDARY OBJECTIVE:

- To increase the safety of workers in the organization.
- To reduce the wastage. 5S teaches to clean up the process by arranging the materials in a disciplined way.

- To increase the workers commitment by applying 5S.

COMPANY PROFILE

Magnum clothing is a garment manufacturer with production units and head office in Chennai, India and a satellite design and sales office in London, UK. We specialize in the manufacture of ladies and girls casual and soft separates and dresses. It was founded in 1986 and its current production capacity is 3,50,000 pieces per month.

It is a diversified conglomerate with majority business interest in Textile & Apparel stores as well as presence across diverse segments such as FMCG, Engineering and prophylactics in national and international markets. Having enjoyed the patronage of billion consumers, Magnum clothing as a brand has been consistently delivering world class quality products to its consumers since the past nine decades.

Magnum clothing group also has an extensive presence in the B2B space, through its garmenting business. It's state of art and wholly owned subsidiaries such as Silver spark Apparel ltd, Celebrations Apparel ltd & Everblue Apparel ltd

Vision:To deliver innovation and quality to our customers by following a progressive and on time approach and further thecause of a sustainable future by promoting an eco-friendly approach in all our operations.

AWARDS AND RECOGNITION

- Global award for best store design, RTW store : Awarded by VMSD magazine, Canada.
- Excellence in cost management - RLCL: Awarded by the institute of cost accountants.
- Export Excellence award 2016-SSAL: Best export manufacturer for the 2nd consecutive year.
- 5s excellence award -SSAL II: In the large manufacturing category.

REVIEW OF LITERATURE

- **Sanchez et al (2015)** have studied that implementation of 5S at SMEs in Bogota (Colombia) considerably improved the selected four study factors namely with a rise of productivity (44%), quality (44%), organizational climate (52%) and reduction of risk (90%).
- **Gupta and Jain (2015)** have examined that implementation of 5S at all the workstations of small scale organization considerably reduced the tool searching time from

30 minutes to 5 minutes and make workplace effectively productive. They analyzed that 5S is a powerful tool which can be implemented in various industries whether it is micro, small, medium or large.

- **Patel and Thakur (2014)** have reported the benefits of 5S in the various organizations. They have observed that 5S technique drastically changes the image of the company. Benefits such as cost reduction, efficiency, effectiveness, quality, safety, security and pollution free environment were obtained on the successful implementation of 5S
- **Ikuma and Nahmens (2014)** showed that safety is an inbuilt part of 5S in healthcare system. They concluded that 5S can facilitate process improvement, work environment and safety.
- **Singh et al (2013)**, have experienced the implementation of TPM in a machine shop. The success of TPM implementation was measure by the overall equipment effectiveness. The authors concluded that success of total productive maintenance depends upon various pillars like 5S, quality maintenance, kaizen and office TPM.
- **Pasale and Bagi (2013)** have stated that the practice of 5S technique in small scale manufacturing industries have resulted in enhancement of efficiency of production system from 67% to 88% within a short span of few weeks.
- **Suarez-Barraza and Ramis-Pujol (2012)** have studied that number of multinational companies are utilizing 5S technique as a vital step or main driver for the implementation of lean thinking or lean-kaizen approach.
- **Sorooshian et al (2012)** have presented experience of 5S implementation and closely examined the effects of its implementation. The study focused on planning and issues from the manager's and employee's perception. They found that 5S concept strengthens and facilitates team work, discipline, productive environment.
- **Hunglin (2011)** has implemented the principles of 5S in Wang Chen manufacturing company in order to organize tools, improving the work environment and efficient productive process. The study revealed that 5S implementation led to reduction in time wastage by 49% and provided more productive time to meet the customer demands alongwith good profits.

RESEARCH METHODOLOGY

RESEARCH DESIGN

In this study the researcher has resorted to descriptive research design.

RESEARCH INSTRUMENT:

The research instrument used in this study “structured questionnaire, . The questions are presented with exactly thesame wording and in the same order to all the respondents.

QUESTIONNAIRE DESIGN:

The structured questionnaire for effectiveness of 5S implementation consists with the closed ended questions.

DATA COLLECTION:

Data refers to information or facts. It includes numerical figures, non-numerical figures, descriptive facts, and qualitative information.

PRIMARY DATA:

The researcher has used structured questionnaire for primary data collection.

SECONDARY DATA:

The researcher had collected the secondary data through previous projects, journals, etc. Secondary data about the company profile and other details were collected from the company website.

SAMPLE SIZE:

Due to time and resource constraint the sample size has been as 100 in consultation with the company guide and the project guide.

SAMPLING PROCEDURE:

Convenience sampling has been used in this study. Convenience sampling is used for selection of homogeneous sample for the study, it is a non-probability sampling. Thus research study may include study objects, which are conveniently located.

TOOLS USED FOR RESEARCH:

Statistical analysis is concerned with the various facts of significance for testing hypothesis in order to determine with what validity can be said to indicate some conclusion.

PERCENTAGE ANALYSIS:

This method is useful when making comparisons between two or more series of data. Percentage is used to compare the relative terms and the distribution of two or more series of data. Since percentage reduces everything to a common base.

Percentage of Respondent = (No. of respondents/Total respondents) x 100

DATA ANALYSIS AND INTERPRETATION

DEMOGRAPHIC PROFILE ANALYSIS

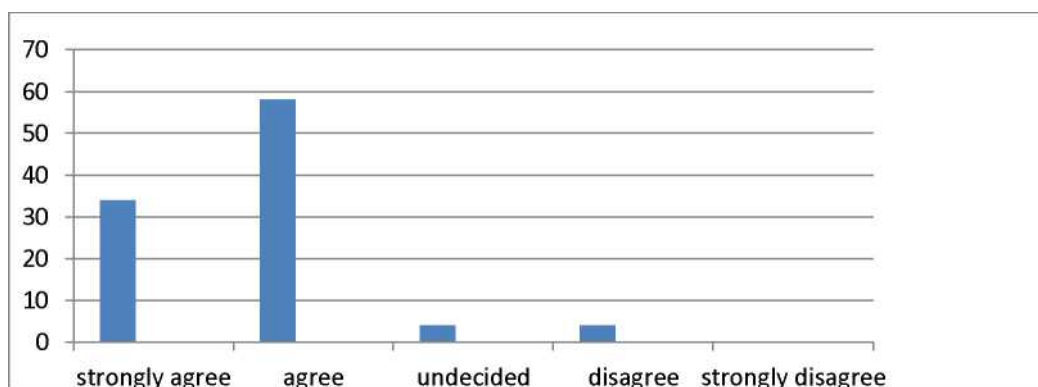
| Particulars | Frequency | Percent |
|-------------|-----------|---------|
| Age | | |
| 18-20 | 8 | 16 |
| 20-25 | 16 | 30 |

| | | |
|-----------------------|----|-----|
| 25-30 | 20 | 40 |
| Above 35 | 7 | 14 |
| Total | 50 | 100 |
| Gender | | |
| Male | 6 | 12 |
| Female | 44 | 88 |
| Total | 50 | 100 |
| Marital Status | | |
| Married | 35 | 70 |
| Unmarried | 15 | 30 |
| Total | 50 | 100 |
| Qualification | | |
| 12 th standard | 34 | 68 |
| Diploma | 6 | 12 |
| Degree | 4 | 8 |
| Others | 6 | 12 |
| Total | 50 | 100 |
| Experience | | |
| 0-1 year | 6 | 12 |
| 1-2 years | 9 | 18 |
| 2-5 years | 20 | 40 |
| Above 5 years | 15 | 30 |
| Total | 50 | 100 |

From the above table it is been inferred that 40% of the respondents age is between 25-30 years. The maximum number of female employees are working there as the study concludes with 88%. 70% of the employees are married. 68% of the employees have completed their higher secondary school. 40% of the employees have two to five years of experience.

IMPLEMENTATION OF 5S HAS REDUCED TOOL SEARCHING TIME

| S.NO | Particulars | No. of Respondents | % of Respondents |
|------|-------------------|--------------------|------------------|
| 1 | Strongly agree | 17 | 34% |
| 2 | Agree | 29 | 58% |
| 3 | Undecided | 2 | 4% |
| 4 | Disagree | 2 | 4% |
| 5 | Strongly disagree | - | - |
| | Total | 50 | 100% |



The above chart depicts that 34% of the employees strongly agree that implementation of 5S has reduced the tool searching time, 58% of the employees agree, 4% of the employees disagree and 4% of the employees are not able to decide.

CHI-SQUARE ANALYSIS

AIM

To find out the relationship between the age and accepting the implementation of 5S efficiently.

COMPARISON BETWEEN AGE AND ACCEPTING THE IMPLEMENTATION OF 5S EFFICIENTLY

| AGE | STRONGLY AGREE | AGREE | UNDECIDED | DISAGREE | STRONGLY DISAGREE | TOTAL |
|-----|----------------|-------|-----------|----------|-------------------|-------|
| | | | | | | |

| | | | | | | |
|-------------|----|----|---|---|---|----|
| 18-20 | 3 | 1 | 0 | 1 | 1 | 6 |
| 20-25 | 3 | 1 | 1 | 1 | 2 | 8 |
| 25-30 | 7 | 4 | 0 | 3 | 2 | 16 |
| Above 35 | 8 | 6 | 2 | 2 | 2 | 20 |
| Total | 21 | 12 | 3 | 7 | 7 | 50 |

Null Hypothesis (H0): There is no significant relationship between the age and accepting the implementation of 5S efficiently.

Alternate Hypothesis (H1): There is significant relationship between age and accepting the implementation of 5S efficiently.

INFERENCE

The Calculated value is lesser than the table value so we accept the Null Hypothesis. There is no significant relationship between the age and accepting the implementation of 5S efficiently.

FINDINGS

- 58% of the employees agree that the implementation of 5S has reduced the tools searching time.
- 52% of the employees agree that the implementation of 5S has reduced the production cost.
- 60% of the employees agree that the implementation of 5S has reduced the number of accidents in work place.
- 66% of the employees agree that the implementation of 5S has improved the productivity of the company.
- 74% of the employees agree that the implementation of 5S has encouraged the workers to keep their work place clean and healthy.
- 76% of the employees agree that the implementation of 5S has created pleasant working environment.

SUGGESTION AND CONCLUSION

The frequency of training program should be increased for effective understanding of 5S by the employees. Implementing the 5S rules should not apply to the staff only; it hardly needed a bunch of commitment from the top to down level in promoting 5S usage and implementing it in all the levels. The implementation of 5 S has reduced unnecessary movements, ensures safety, reduced the required floor space, ensures cleanliness and it has created a pleasant

working condition. so it is recommended to continue with the same practice in an effective manner for their further success.

A study on the effectiveness of implementation of 5S with reference to Magnum Clothing .pvt. ltd has a wide scope in the present scenario. The study took a systematic analysis to know the effectiveness of implementing 5S. Quality elements such as cost efficiency, enhancement, standardization and customer satisfaction will only being achieve if all of the staff had given full commitment & enjoy the real means of 5S. Since with many improvement techniques, commitment & development in addressing the successfulness of 5S in among the staff, hope that this implementation will give better workplace to all.

References:

- [1] Arash Ghodrati, Norzima Zulkifli (2012), A Review on 5S Implementation in industrial and business organisations.
- [2] Becker, John E (2001), Implementing 5S : To promote safety and housekeeping, Professional safety.
- [3] Dilek A.G (2013), A conceptual evaluation of 5S Model in Hotels, African Journal Business Management.
- [4] Gapp, Fischer.R and Kobayashi.K (2008), Implementing 5S within a Japanese Context: An integrated management system.
- [5] Gupta.A, Verma.S, Gupta.S (2015), An Application of 5S concept to organize the workplace at a small scale manufacturing company, International Journal of Advanced Engineering Technology.
- [6] Ab Rahman, M.N., et al., Implementation of 5S Practices in the Manufacturing Companies, Applied Sciences, 2010. Moradi, M., M.Abdollahzadeh, and A.Vakili, Effects of implementing 5S on Total productive Maintenance, 2011.