ISSN: 4860 - 4227
Volume 10, Number 1, 2024
Journal of Advancement in Management and Accounting Research

THE RELATIONSHIP BETWEEN 5S METHODOLOGY AND WORKPLACE EFFICIENCY OF OIL AND GAS FIRMS IN RIVERS STATE

Gospel Onyebuchi Okoro
Ph.D Student, Department of Management Science
Ignatius Ajuru University of Education, Rumuolumeni, Port Harcourt, Nigeria.

Email: buchiokorog@gmail.com

ABSTRACT

This study examine the relationship between 5S methodology and workplace efficiency of oil and gas firms in Rivers state. The dimensions of 5s methodology adopted under the study were 5s information management, 5s office environment while measures of workplace efficiency were resource efficiency, operational efficiency. Four research questions and four hypotheses were raised to guide the study. Cross sectional survey design was adopted for this study. The population of the study consisted of 50 Oil and Gas firms operating in Rivers State for over 10 years and above who are members of petroleum association of Nigeria as retrieved from yellow page directory (2022). The study adopted a census sampling method. 3 managerial staff (operational manager, branch manager and human resource manager) were selected from each firm multiplied by 50 firms give us a total of 150 respondents. The primary data for this study were generated through questionnaire. The result of the Cronbach's Alpha reliability test indicates .806 which is above .70 which implies that the items are reliable. The research questions were analysis with the aid of descriptive statistics using mean and standard deviation while hypotheses were tested using Pearson product moment correlation on SPSS. The study revealed that there is a significant relationship between 5s Information Management and measures of workplace Efficiency of oil and gas firms in Rivers state. There is a significant relationship between relationship between 5s Office Environments and measures of workplace Efficiency of oil and gas firms in Rivers state. The study concluded that there is a significant relationship between 5S methodology and workplace efficiency of oil and gas firms in Rivers state. The successful implementation of 5S in information management and office environments can lead to improved productivity, reduced waste, enhanced safety, and streamlined processes. The study recommended among others that Oil and gas firms in Rivers State should invest in comprehensive training programs to educate employees about the 5S methodology and its benefits. This will ensure that all staff members understand the principles and actively participate in the implementation process.

Keywords: 5s methodology, workplace efficiency

INTRODUCTION

Background to the study

The 5S methodology is a systematic approach to workplace organization and standardization that originated in Japan. The term "5S" stands for five Japanese words: seiri (sort), seiton (set in order), seiso (shine), seiketsu (standardize), and shitsuke (sustain). This methodology aims to improve workplace efficiency, safety, and productivity by creating a clean and organized work environment. The 5S methodology has been widely adopted in various industries around the world, including manufacturing, healthcare, and service sectors (Liker & Meier, 2006). The 5S methodology was developed as part of the Toyota Production System (TPS) and is closely associated with lean manufacturing principles. It emphasizes the importance of visual management, waste reduction, and employee involvement in maintaining a well-organized workspace. The implementation of 5S involves sorting and removing unnecessary items from the work area, arranging necessary items in a logical order, cleaning and inspecting the workspace regularly, establishing standardized procedures, and sustaining the discipline to maintain the improvements (Hirano, 1996).

Research on the 5S methodology has demonstrated its effectiveness in improving workplace organization, safety, and overall efficiency. Studies have shown that implementing 5S practices can lead to reduced waste, improved workflow, enhanced employee morale, and better-quality outcomes. Furthermore, the 5S methodology has been extended beyond manufacturing settings to office environments and information management systems, where it has proven to be beneficial in streamlining processes and enhancing productivity. The 5S methodology has become an integral part of continuous improvement initiatives in organizations seeking to optimize their operations and create a culture of efficiency and excellence (Womack, et al.,2007).

Workplace efficiency refers to the extent to which an organization can optimize its resources and operations to achieve maximum productivity and output. It encompasses various aspects such as resource efficiency, operational efficiency, and overall effectiveness in achieving organizational goals. The study of workplace efficiency is crucial for organizations as it directly impacts their performance, competitiveness, and sustainability in the market.

Resource efficiency in the workplace pertains to the optimal utilization of resources such as raw materials, energy, and time to minimize waste and maximize output. This involves implementing strategies to reduce resource consumption, improve recycling and reuse practices, and adopt sustainable technologies. Resource efficiency not only contributes to cost savings but also aligns with environmental sustainability goals. Operational efficiency focuses on streamlining processes, reducing redundancies, and enhancing productivity within an organization. It involves identifying and eliminating inefficiencies in workflows, improving communication and collaboration among employees, and leveraging technology to automate tasks. Operational efficiency is essential for enhancing overall organizational performance and customer satisfaction.

In the context of oil and gas firms in Rivers state, Nigeria, the study on the 5S methodology and workplace efficiency aims to investigate how the implementation of 5S practices can enhance operational performance within these organizations. Rivers state is known for its significant oil and gas industry, making it an ideal location for such a study. The oil and gas sector is highly complex and involves various processes, equipment, and safety considerations. Therefore, the application of 5S principles can potentially lead to streamlined operations, improved safety standards, and overall efficiency gains within these firms. It is in the light of the above that this study is carried out to examine the relationship between 5S methodology and workplace efficiency of oil and gas firms in Rivers state.

Statement of the problems

Oil and gas firms in Rivers, Nigeria, face several challenges related to workplace efficiency and the implementation of the 5S methodology. The 5S methodology is a systematic approach to workplace organization that originated in Japan and focuses on five key principles: sort, set in order, shine, standardize, and sustain. When applied effectively, the 5S methodology can lead to improved productivity, safety, and overall operational efficiency. However, there are several issues that can hinder its successful implementation in oil and gas firms in Rivers. One of the primary problems affecting oil and gas firms in Rivers with regard to workplace efficiency is the lack of standardized processes and procedures. In many cases, these firms operate in complex and high-risk environments where safety and regulatory compliance are paramount. Without standardized processes, there is a risk of inefficiencies, errors, and safety hazards. Additionally, the lack of standardized procedures can lead to inconsistencies in work practices across different teams or departments within the organization.

Another challenge is the issue of waste management. Oil and gas operations often generate significant amounts of waste materials, including hazardous substances. Proper waste management is crucial for environmental protection and regulatory compliance. However, inadequate waste management practices can lead to environmental pollution and legal liabilities for the firms. Furthermore, workforce engagement and training are critical factors that influence workplace efficiency. In some cases, employees may not be adequately trained in the principles of the 5S

methodology or may lack motivation to actively participate in its implementation. This can result in resistance to change and a lack of commitment to maintaining organized workspaces. Moreover, health and safety concerns are prevalent in the oil and gas industry. Workplace accidents and injuries can have severe consequences for both employees and the company as a whole. Therefore, ensuring a safe working environment is essential for maintaining operational efficiency. Oil and gas firms in Rivers face various challenges related to workplace efficiency and the implementation of the 5S methodology. Addressing these issues requires a comprehensive approach that encompasses standardized processes, waste management practices, employee engagement and training, health and safety measures, as well as technological advancements.

Conceptual Framework

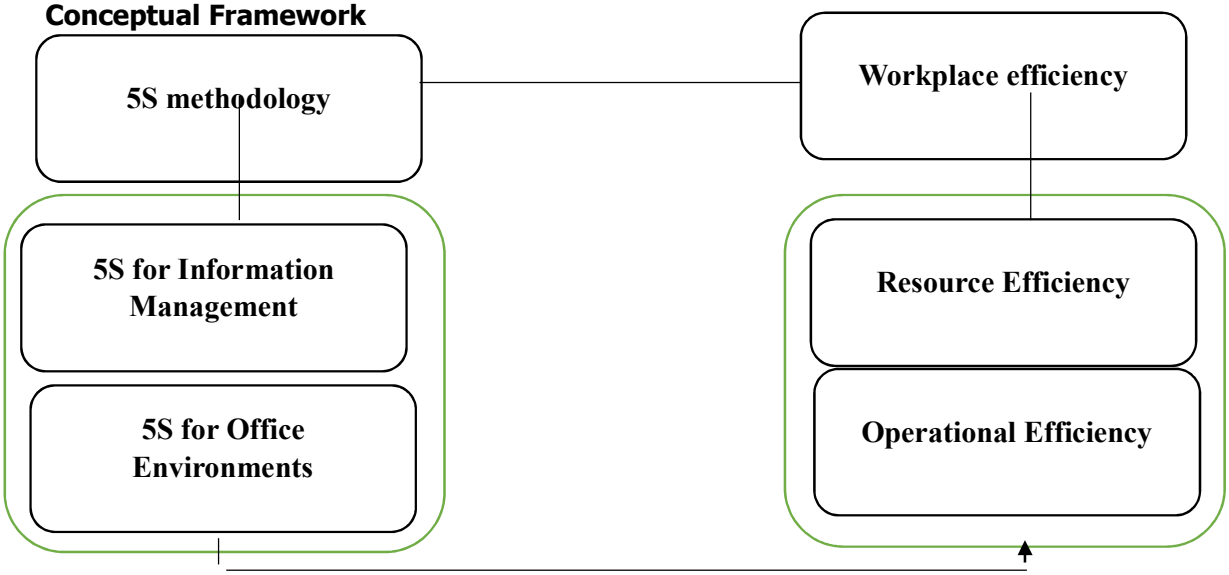


Figure 1: conceptual framework showing 5S methodology and Workplace efficiency
Source: Liker, & Meier (2006). Robbins, & Judge, (2018).

Aim & Objectives

The aim of this study is to examine the relationship between 5S methodology and workplace efficiency of oil and gas firms in Rivers state. Specifically, the study sought to:

1) determine the relationship between 5s Information Management and Resource Efficiency of oil and gas firms in Rivers state.
2) evaluate the relationship between 5s Information Management and operational Efficiency of oil and gas firms in Rivers state.
3) determine the relationship between 5s Office Environments and Resource Efficiency of oil and gas firms in Rivers state.
4) evaluate the relationship between 5s Office Environments and operational Efficiency of oil and gas firms in Rivers state.

Research Questions

The following research questions were raised to guide the study.

1) What is the relationship between 5s Information Management and Resource Efficiency of oil and gas firms in Rivers state?
2) Is there a relationship between 5s Information Management and operational Efficiency of oil and gas firms in Rivers state?
3) What is the relationship between 5s Office Environments and Resource Efficiency of oil and gas firms in Rivers state.

4) Is there a relationship between 5s Office Environments and operational Efficiency of oil and gas firms in Rivers state.

Research Hypotheses

The following null hypotheses were formulated to guide the study.

Ho_1: There is no significant relationship between 5s Information Management and Resource Efficiency of oil and gas firms in Rivers state.

Ho_2: There is no significant relationship between relationship between 5s Information Management and operational Efficiency of oil and gas firms in Rivers state.

Ho_3: There is no significant relationship between relationship between 5s Office Environments and Resource Efficiency of oil and gas firms in Rivers state.

Ho_4: There is no significant relationship between relationship between 5s Office Environments and operational Efficiency of oil and gas firms in Rivers state.

Scope of the study

The scope of this study is centered on the predictor variable(5S methodology) with dimensions of 5S for Information Management, 5s Office Environments and the criterion variable(workplace efficiency) have measures of Resource Efficiency, operational Efficiency of oil and gas firms in Rivers state.

Significance of the Study

The study on the 5S methodology and workplace efficiency of oil and gas firms in Rivers State is of significant importance due to several reasons. The 5S methodology is a systematic approach to workplace organization, which originated from Japanese manufacturing techniques. It consists of five principles: Sort, Set in Order, Shine, Standardize, and Sustain. The application of the 5S methodology in oil and gas firms can lead to improved workplace efficiency, safety, and productivity. Firstly, the implementation of the 5S methodology can lead to a more organized and efficient work environment within oil and gas firms. This can result in reduced waste, improved workflow, and enhanced safety measures. By sorting and setting things in order, unnecessary items are removed from the workspace, leading to a more streamlined and efficient operation.

Furthermore, the sustainability aspect of the 5S methodology ensures that the improvements made are maintained over time. This is particularly crucial for oil and gas firms operating in Rivers State as it can lead to long-term benefits such as cost savings, improved employee morale, and a positive impact on the overall business performance. The study on the 5S methodology and workplace efficiency of oil and gas firms in Rivers State will benefit various categories of individuals:

1) **Oil and Gas Firms**: The findings of the study will directly benefit oil and gas firms operating in Rivers State by providing them with insights into how the implementation of the 5S methodology can enhance their workplace efficiency.
2) **Employees**: The study will be beneficial for employees working within these firms as it can lead to a safer and more organized work environment, potentially reducing workplace accidents and improving overall job satisfaction.
3) **Management Personnel**: Managers within oil and gas firms will gain valuable knowledge from this study on how to implement and sustain the 5S methodology within their organizations, leading to improved operational efficiency.
4) **Regulatory Bodies**: Regulatory bodies overseeing the oil and gas industry in Rivers State may benefit from understanding how the 5S methodology can contribute to better workplace safety standards within these firms.
5) **Academic Community**: Researchers and scholars interested in organizational management, industrial engineering, or oil and gas operations will benefit from the insights provided by this study for further academic research.

REVIEW OF RELATED LITERATURE

Conceptual Review

5s Methodology

The 5S methodology is a systematic approach to workplace organization and standardization that originated in Japan. It is a lean manufacturing tool that aims to improve efficiency, safety, and productivity by organizing the workplace and eliminating waste. The 5S methodology consists of five principles: Sort, Set in Order, Shine, Standardize, and Sustain. Each principle focuses on specific actions to create a clean, organized, and efficient work environment (Liker, & Meier, 2006). Sort (Seiri): This principle involves separating necessary items from unnecessary ones and removing the latter from the workplace. It helps in decluttering the workspace and identifying essential tools, materials, and equipment required for daily operations. Set in Order (Seiton): Once the necessary items are sorted, this principle focuses on arranging them in a logical and efficient manner. It involves assigning specific locations for tools and materials, labeling storage areas, and ensuring that everything has a designated place for easy access (Tapping, et al.,2002).

Shine (Seiso): The shine principle emphasizes cleanliness and regular maintenance of the workspace. It involves cleaning work areas, equipment, and tools to ensure a safe and hygienic environment. Regular cleaning also helps in identifying potential issues such as equipment malfunctions or safety hazards. Standardize (Seiketsu): Standardization involves establishing consistent procedures and practices for maintaining the organized workspace. It includes creating visual controls, checklists, and standardized processes to sustain the improvements achieved through sorting, setting in order, and shining (Rother & Shook 2009).

Sustain (Shitsuke): The sustain principle focuses on maintaining the improvements made through the previous 4S activities. It involves developing a culture of continuous improvement, employee training, regular audits, and ongoing reinforcement of 5S practices to ensure long-term sustainability. The 5S methodology is widely used across various industries to enhance operational efficiency, reduce waste, improve safety, and create a more organized work environment. Its principles can be applied not only in manufacturing settings but also in offices, healthcare facilities, service industries, and other work environments to streamline processes and optimize productivity (Liker, & Meier, 2006).

Dimensions of 5s Methodology

5s Information Management

5S Information Management is a systematic approach to organizing and managing information in a workplace or organization. The 5S methodology originated in Japan and is based on five Japanese words: seiri (sort), seiton (set in order), seiso (shine), seiketsu (standardize), and shitsuke (sustain). These principles are applied to information management to improve efficiency, productivity, and safety by eliminating waste, reducing errors, and creating a more organized and structured work environment (Rother, & Shook, 2003).

Tapping, et al., (2002) asserted that the first step, seiri (sort), involves sorting through all information and materials to separate the necessary from the unnecessary. This helps in identifying and removing obsolete or redundant information, reducing clutter, and improving accessibility to important data. The second step, seiton (set in order), focuses on arranging the necessary information in a logical and efficient manner. This step aims to create a standardized system for storing and retrieving information, making it easier for employees to find what they need when they need it. The third step, seiso (shine), emphasizes the importance of cleanliness and organization in maintaining an efficient work environment. This involves regular maintenance of the information storage areas to ensure that they remain clean, organized, and free from clutter. The fourth step, seiketsu (standardize), involves establishing standardized procedures for maintaining the organized state achieved through the previous steps. This includes creating guidelines for organizing information, conducting regular audits, and ensuring that the 5S principles are consistently applied throughout the organization. The final step, shitsuke (sustain), focuses on sustaining the

improvements made through 5S by developing a culture of continuous improvement and discipline within the organization (Hammer, & Champy, 2009).
Implementing 5S Information Management can lead to several benefits including improved productivity, reduced errors, enhanced safety, better utilization of resources, and increased employee satisfaction. By applying the 5S principles to information management, organizations can create a more efficient and organized work environment that supports their overall goals and objectives (Tapping, et al.,2002).

5s Office Environments
5S Office Environments is a methodology that focuses on organizing and optimizing workspaces for increased efficiency, productivity, and safety. The term "5S" stands for five Japanese words that begin with the letter "S": Seiri (sorting), Seiton (straightening), Seiso (cleaning), Seiketsu (standardizing), and Shitsuke (sustaining). These principles are applied to various work environments, including offices, manufacturing facilities, and warehouses (Tapping, et al., 2002). 5S is a workplace organization method that originated in Japan and has been widely adopted in various industries around the world. The 5S methodology aims to improve efficiency, productivity, and safety by organizing the workplace and standardizing processes (Liker, & Meier, 2006).

Workplace Efficiency
Workplace efficiency refers to the extent to which an organization can produce maximum output with minimum input, thereby optimizing resources and achieving its objectives. It encompasses various aspects of organizational operations, including productivity, time management, resource allocation, and overall effectiveness. Achieving workplace efficiency is crucial for organizations as it directly impacts their competitiveness, profitability, and sustainability. This comprehensive discussion will explore the concept of workplace efficiency in depth, covering its importance, factors influencing it, strategies for improvement, and its implications for organizational success (Robbins, & Judge, 2018).
Efficient workplaces are essential for organizations to remain competitive in today's dynamic business environment. Enhanced workplace efficiency leads to increased productivity, reduced operational costs, improved customer satisfaction, and better utilization of resources. By streamlining processes and workflows, organizations can achieve higher output with the same or even fewer resources, thereby gaining a strategic advantage over competitors. Moreover, efficient workplaces contribute to employee satisfaction and engagement by minimizing unnecessary tasks and optimizing work processes (Mankiw, & Taylor, 2014).
Several factors influence workplace efficiency, including organizational culture, leadership style, employee motivation, communication channels, technological infrastructure, and operational procedures. A positive organizational culture that promotes collaboration, innovation, and continuous improvement fosters workplace efficiency. Effective leadership plays a pivotal role in setting clear goals, providing direction, and empowering employees to perform at their best. Employee motivation and engagement are critical for maintaining high levels of workplace efficiency as motivated employees are more likely to contribute positively to organizational goals. Furthermore, seamless communication channels and robust technological infrastructure facilitate efficient information flow and task execution (Robbins, & Judge, 2018).
Organizations can adopt various strategies to enhance workplace efficiency. These include process optimization through lean management principles, automation of repetitive tasks using technology, implementation of performance management systems to track employee productivity, fostering a culture of continuous improvement through regular feedback and training programs, and promoting work-life balance to prevent burnout and enhance overall productivity. Additionally, effective time management techniques such as prioritizing tasks, setting realistic deadlines, and minimizing distractions can significantly improve workplace efficiency (Drucker, 2006).

Measures of workplace efficiency

Resource Efficiency

Resource efficiency refers to the optimal use of resources to achieve maximum output while minimizing waste and environmental impact. It is a critical concept in sustainable development and environmental management, as it aims to address the growing concerns about resource depletion, environmental degradation, and climate change (Mankiw, et al.,2014). Resource efficiency encompasses various aspects of resource management, including energy, water, materials, and land use. This comprehensive approach seeks to promote a more sustainable and responsible use of natural resources across different sectors of society, including industry, agriculture, transportation, and urban planning. One of the key principles of resource efficiency is the concept of decoupling economic growth from resource consumption. This means that economic development can occur without a corresponding increase in resource use and environmental degradation. Achieving decoupling requires the adoption of innovative technologies, efficient production processes, sustainable consumption patterns, and the integration of environmental considerations into decision-making at all levels (Grant, 2016).

Operational Efficiency

Operational efficiency refers to the ability of an organization to utilize its resources in the most effective manner to achieve its objectives. It involves optimizing processes, reducing waste, and improving productivity. Operational efficiency is a critical aspect of organizational performance, as it directly impacts the cost structure, customer satisfaction, and overall competitiveness of a business. Achieving operational efficiency requires a holistic approach that encompasses various aspects of an organization, including its processes, technology, human resources, and strategic management (Grant, 2016).

One key element of operational efficiency is process optimization. This involves analyzing and streamlining the various workflows and procedures within an organization to eliminate bottlenecks, reduce redundancies, and enhance overall productivity. Process optimization often involves the use of tools such as Lean Six Sigma methodologies, which aim to identify and eliminate non-value-added activities within processes. Another important aspect of operational efficiency is resource utilization. This involves ensuring that the organization's resources, including human capital, financial assets, and physical infrastructure, are utilized in the most effective manner. This may involve implementing efficient resource allocation strategies, investing in technology and automation to improve productivity, and optimizing inventory management to minimize waste (Drucker, 2006).

Theoretical Review

Total quality management (TQM) Theory

Total Quality Management (TQM) is a management philosophy that originated in the 1950s and gained popularity in the 1980s. The theory of TQM was propounded by W. Edwards Deming, an American statistician, professor, author, lecturer, and consultant. Deming is widely regarded as the father of the quality evolution and is known for his significant impact on Japanese manufacturing through his teachings on statistical process control and quality management. In 1950, Deming introduced his principles of TQM to Japanese business leaders, which ultimately led to the transformation of Japan's post-war economy and its emergence as a global manufacturing powerhouse.

The assumptions of Total Quality Management (TQM) theory are based on the belief that quality improvement is essential for organizational success. The theory assumes that all employees are responsible for quality, and that continuous improvement is necessary to meet or exceed customer expectations. TQM also assumes that processes should be managed and improved systematically, and that decision-making should be based on data and analysis rather than intuition.

The relevance of TQM to the study of 5S methodology and workplace efficiency in oil and gas firms in Rivers State lies in its focus on continuous improvement and customer satisfaction. The 5S

methodology, which stands for Sort, Set in order, Shine, Standardize, and Sustain, is a systematic approach to workplace organization and standardization. When combined with TQM principles, the 5S methodology can help oil and gas firms in Rivers State improve their operational efficiency, reduce waste, enhance safety, and create a culture of continuous improvement.

Resource-based view (RBV) Theory

The Resource-Based View (RBV) theory was propounded by Jay Barney, a renowned scholar in the field of strategic management. The theory was first introduced in 1986 in his article "Strategic Factor Markets: Expectations, Luck, and Business Strategy" published in the Management Science journal. The RBV theory is a framework used to determine the strategic resources that a firm possesses and how these resources can be utilized to achieve sustainable competitive advantage.

Assumptions of the RBV Theory include Heterogeneity of Resources: The RBV theory assumes that firms possess different resources and capabilities, which can be a source of competitive advantage. Immobile Resources: It is assumed that valuable resources are not perfectly mobile and can be difficult for competitors to replicate or obtain. Resource Durability: The theory assumes that resources are not easily eroded or depreciated by market competition. Imperfect Resource Mobility: The RBV theory assumes that firms face barriers to resource mobility, making it difficult for competitors to imitate or acquire valuable resources.

Relevance of RBV Theory to the Study of 5S Methodology and Workplace Efficiency in Oil and Gas Firms in Rivers State: The RBV theory is highly relevant to the study of 5S methodology and workplace efficiency in oil and gas firms in Rivers State. The 5S methodology focuses on organizing the workplace for efficiency and effectiveness through the principles of sorting, setting in order, systematic cleaning, standardizing, and sustaining discipline. When applying the RBV theory to this context, it becomes evident that the resources and capabilities possessed by oil and gas firms, such as skilled workforce, advanced technology, operational processes, and safety standards, can be leveraged to implement and sustain the 5S methodology. This integration can lead to improved workplace efficiency, cost reduction, enhanced safety standards, and overall operational excellence.

Empirical Review

Oke, and Adebayo, (2018) carried out a study on assessment of 5S Practices in Manufacturing Firms in Nigeria. Population of the study was Manufacturing firms in Nigeria. Sample Size of the study was 150 employees. Method of Data Analysis was Questionnaire survey and statistical analysis. The study found that the implementation of 5S practices positively impacted workplace efficiency by reducing waste, improving productivity, and enhancing employee morale. The authors concluded that the adoption of 5S practices can lead to significant improvements in manufacturing firms' performance in Nigeria. The study recommended that manufacturing firms should prioritize the implementation of 5S practices as part of their continuous improvement efforts.

Adeleke, and Adeniji, (2019) carried out a study on the Impact of 5S Practices on Workplace Efficiency in Selected Organizations in Lagos State, Nigeria. Population of the study was Selected organizations in Lagos State, Nigeria. Sample Size was 200 employees. Method of Data Analysis was Structured interviews and qualitative analysis. The study revealed that the adoption of 5S practices led to improved workplace organization, reduced clutter, and enhanced safety standards, resulting in increased efficiency and productivity. The authors concluded that the successful implementation of 5S practices can contribute to overall organizational effectiveness and competitiveness. The study recommended that organizations should invest in training and development programs to ensure sustained adherence to 5S principles.

Oladejo, and Ojelabi, (2020) carried out a study on Assessment of Workplace Efficiency through the Application of 5S Principles in Construction Sites in Nigeria. Population of the study was Construction sites in Nigeria. Sample Size was 100 construction workers. Method of Data Analysis was Observational study and statistical analysis. The study found that the application of 5S principles resulted in improved workplace safety, reduced material wastage, and enhanced workflow efficiency

at construction sites. The authors concluded that integrating 5S principles into construction site management can lead to better project outcomes and cost savings. The study recommended that construction companies should incorporate 5S principles into their project management processes to achieve higher levels of efficiency and safety.

Ajayi, and Olawale,(2017) undertook a study on Effectiveness of Implementing 5S Methodology for Workplace Organization in Nigerian Service Organizations. Population of the study was Service organizations in Nigeria. Sample Size was 120 employees. Method of Data Analysis was Mixed methods approach including surveys and case studies. The study revealed that the adoption of 5S methodology led to improved workspace organization, reduced operational errors, and enhanced customer satisfaction within service organizations. The authors concluded that implementing 5S methodology can contribute to service quality improvement and operational excellence in Nigerian service organizations. The study recommended that service organizations should establish a culture of continuous improvement through the sustained application of 5S principles.

Ogunlana, and Afolabi, (2016) undertook a study on application of Lean Principles for Workplace Efficiency Improvement in Nigerian Manufacturing Companies. Population of the study was Manufacturing companies in Nigeria. Sample Size was 180 employees. Method of Data Analysis was Combination of surveys and lean assessment tools. The study found that integrating lean principles such as the 5S methodology resulted in reduced lead times, improved inventory management, and enhanced overall operational efficiency within Nigerian manufacturing companies. The authors concluded that embracing lean principles including the 5S methodology can lead to sustainable improvements in manufacturing operations and competitiveness. The study recommended that Nigerian manufacturing companies should prioritize lean implementation as a strategic approach for achieving operational excellence.

METHODOLOGY

Research Design

Cross sectional survey design was adopted for this study. the study involves the analysis of the relationships between the dimensions of 5S methodology and workplace efficiency of oil and gas firms in Rivers state

Population for the Study

The population of the study consisted of 50 Oil and Gas firms operating in Rivers State for over 10 years and above who are members of petroleum association of Nigeria as retrieved from yellow page directory (2022).

Sample/Sampling Techniques

The study adopted a census sampling method. 3 managerial staff (operational manager, branch manager and human resource manager) were selected from each firm multiplied by 50 firms give us a total of 150 respondents.

Sources of Data (Secondary / Primary)

Primary data were collected expressly for a specific purpose by the investigator himself. This data gives the exact information wanted. Primary data mainly come from direct observation of events, manipulation of variables, performance of experiments and responses to questionnaire. The primary data for this study were generated through questionnaire.

Validity / Reliability of Instrument

The 5S methodology and workplace efficiency questionnaire was independently subjected to content and construct validity by three Lecturers in the Department of Management, Faculty of Management Sciences, Ignatius Ajuru University of Education, Port Harcourt. The corrections and suggestions of the validators were effected on the finale copy of the instrument.

The reliability of empirical measurement is indicated by the internal consistency, One of the most commonly used indicators of internal consistency is Cronbach's alpha coefficient. Questionnaire item statements with Cronbach's alpha reliability coefficient below the 0.70 threshold were eliminated. the test-re-test method was used. 20 copies of the questionnaire instrument were issue and some das later same copies were issue through electronic media. the results were used in computation using Cronbach's alpha test of reliability.

Table 1: Reliability Statistics

Cronbach's Alpha	N of Items
.806	4

Source: Researcher computation via SPSS version 25

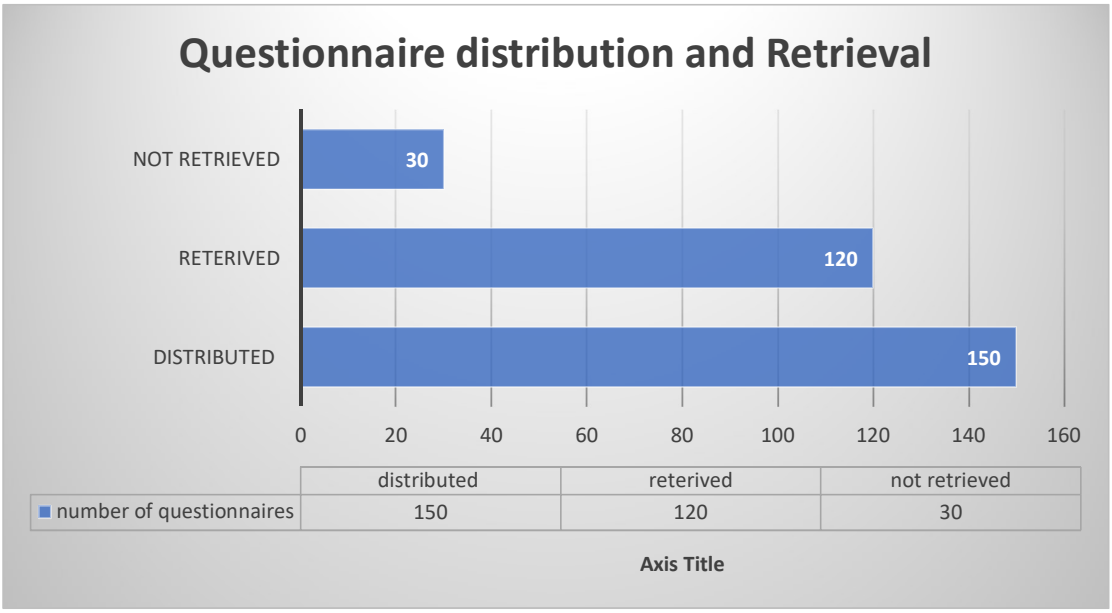
The result of the Cronbach's Alpha reliability test indicates .806 which is above .70 which implies that the items are reliable.

Method of Data Analysis

The research questions were analysis with the aid of descriptive statistics using mean and standard deviation while hypotheses were tested using Pearson product moment correlation on SPSS.

DATA PRESENTATION AND ANALYSIS

Data Presentation



Analysis of data

Univariate Analysis

Table 2: Descriptive Statistics on 5s Methodology

	N	Min	Max	Sum	Mean	Std. Dev.
I have received training on implementing the 5S methodology in my office environment	120	1	5	402	3.35	1.465

I believe that implementing the 5S methodology can improve efficiency in information management	120	1	5	412	3.43	1.339
I engage in sorting unnecessary items from my workspace as part of the 5S methodology	120	1	5	422	3.52	1.506
I think maintaining a clean and organized workspace is important for productivity	120	1	5	434	3.62	1.361
I noticed positive changes in my work environment since implementing the 5S methodology	120	1	5	450	3.75	1.304
I feel that the 5S methodology has improved teamwork and collaboration in your office	120	1	5	408	3.40	1.569
Valid N (listwise)	120					

Source: Survey Data (2023) via SPSS output V.22

Table 1 revealed descriptive Statistics on 5s Methodology. I have received training on implementing the 5S methodology in my office environment have a mean score of 3.35, I believe that implementing the 5S methodology can improve efficiency in information management have a mean score of 3.43, I engage in sorting unnecessary items from my workspace as part of the 5S methodology have a mean score of 3.52, I think maintaining a clean and organized workspace is important for productivity have a mean score of 3.62, I noticed positive changes in my work environment since implementing the 5S methodology have a mean score of 3.75, I feel that the 5S methodology has improved teamwork and collaboration in your office have a mean score of 3.40. Based on our criterion mean of 3.0 and since all the respective mean score is above the criterion man of 3.0, this implies that respondents agreed on the items of 5s methodology.

Table 3: Descriptive Statistics on workplace efficiency

	N	Min	Max	Sum	Mean	Std. Dev
I believe that the current allocation of resources aligns with the demands of my job responsibilities	120	1	5	388	3.23	1.505
I often encounter bottlenecks or delays in completing tasks due to resource constraints	120	1	5	396	3.30	1.376

I feel that the organization's operational processes are streamlined and efficient	120	1	5	404	3.37	1.534
there are specific tools or technologies enhance operational efficiency in my role	120	1	5	416	3.47	1.378
How satisfied are you with the current workflow and operational procedures in my department	120	1	5	430	3.58	1.351
additional training or resources could improve overall operational efficiency within our team	120	1	5	388	3.23	1.570
Valid N (listwise)	120					

Source: Survey Data (2023) via SPSS output V.22

Table 3 revealed descriptive Statistics on workplace efficiency. I believe that the current allocation of resources aligns with the demands of my job responsibilities have a mean score of 3.23, I often encounter bottlenecks or delays in completing tasks due to resource constraints have a mean score of 3.30, I feel that the organization's operational processes are streamlined and efficient have a mean score of 3.37, there are specific tools or technologies enhance operational efficiency in my role have a mean score of 3.47, How satisfied are you with the current workflow and operational procedures in my department have a mean score of 3.58, additional training or resources could improve overall operational efficiency within our team have a mean score of 3.23. Based on our criterion mean of 3.0 and since all the respective mean score is above the criterion man of 3.0, this implies that respondents agreed on the items of workplace efficiency.

Bivariate Analysis

Ho_1: There is no significant relationship between 5s Information Management and Resource Efficiency of oil and gas firms in Rivers state.

Correlations

		5s Information Management	Resource Efficiency
5s Information Management	Pearson Correlation	1	.495**
	Sig. (2-tailed)		.000
	N	120	120
Resource Efficiency	Pearson Correlation	.495**	1
	Sig. (2-tailed)	.000	
	N	120	120

**. Correlation is significant at the 0.01 level (2-tailed).

$Ho_{1:}$: There is no significant relationship between 5s Information Management and Resource Efficiency of oil and gas firms in Rivers state .(correlation. 1) reveals there is a significant relationship between 5s Information Management and Resource Efficiency of oil and gas firms in Rivers state (where rho = .495 and p =0.000) and based on the decision rule of $p < 0.05$ for null rejection; we reject the null hypothesis and restate *that there is a significant relationship between 5s Information Management and Resource Efficiency of oil and gas firms in Rivers state.*

Ho_2: There is no significant relationship between relationship between 5s Information Management and operational Efficiency of oil and gas firms in Rivers state.

Correlations

		5s Information Management	operational Efficiency
5s Information Management	Pearson Correlation	1	.541**
	Sig. (2-tailed)		.000
	N	120	120
operational Efficiency	Pearson Correlation	.541**	1
	Sig. (2-tailed)	.000	
	N	120	120

**. Correlation is significant at the 0.01 level (2-tailed).

$Ho_{2:}$: There is no significant relationship between 5s Information Management and operational Efficiency of oil and gas firms in Rivers state .(correlation. 2) reveals there is a significant relationship between 5s Information Management and operational Efficiency of oil and gas firms in Rivers state (where rho = .541 and p =0.000) and based on the decision rule of $p < 0.05$ for null rejection; we reject the null hypothesis and restate *that there is a significant relationship between 5s Information Management and operational Efficiency of oil and gas firms in Rivers state.*

Ho_3: There is no significant relationship between relationship between 5s Office Environments and Resource Efficiency of oil and gas firms in Rivers state.

Correlations

		5s Office Environments	Resource Efficiency
5s Office Environments	Pearson Correlation	1	.568**
	Sig. (2-tailed)		.000
	N	120	120
Resource Efficiency	Pearson Correlation	.568**	1
	Sig. (2-tailed)	.000	
	N	120	120

**. Correlation is significant at the 0.01 level (2-tailed).

$Ho_{3:}$: There is no significant relationship between 5s Office Environments and Resource Efficiency of oil and gas firms in Rivers state .(correlation. 3) reveals there is a significant relationship between 5s Office Environments and Resource Efficiency of oil and gas firms in Rivers state (where rho = .568 and p =0.000) and based on the decision rule of $p < 0.05$ for null rejection; we reject the null hypothesis and restate *that there is a significant relationship between 5s Office Environments and Resource Efficiency of oil and gas firms in Rivers state.*

Ho_4: There is no significant relationship between relationship between 5s Office Environments and operational Efficiency of oil and gas firms in Rivers state.

Correlations

		5s Office Environments	operational Efficiency
5s Office Environments	Pearson Correlation	1	.428**
	Sig. (2-tailed)		.000
	N	120	120
operational Efficiency	Pearson Correlation	.428**	1
	Sig. (2-tailed)	.000	
	N	120	120

**. Correlation is significant at the 0.01 level (2-tailed).

Ho_4: There is no significant relationship between 5s Office Environments and operational Efficiency of oil and gas firms in Rivers state .(correlation. 4) reveals there is a significant relationship between 5s Office Environments and operational Efficiency of oil and gas firms in Rivers state (where rho = .568 and p =0.000) and based on the decision rule of $p < 0.05$ for null rejection; we reject the null hypothesis and restate *that there is a significant relationship between 5s Office Environments and operational Efficiency of oil and gas firms in Rivers state.*

Summary of findings

1) There is a significant relationship between 5s Information Management and Resource Efficiency of oil and gas firms in Rivers state.
2) There is a significant relationship between relationship between 5s Information Management and operational Efficiency of oil and gas firms in Rivers state.
3) There is a significant relationship between relationship between 5s Office Environments and Resource Efficiency of oil and gas firms in Rivers state.
4) There is a significant relationship between relationship between 5s Office Environments and operational Efficiency of oil and gas firms in Rivers state.

CONCLUSION, RECOMMENDATIONS & CONTRIBUTION TO KNOWLEDGE

Conclusion

The study concluded that there is a significant relationship between 5S methodology and workplace efficiency of oil and gas firms in Rivers state. The successful implementation of 5S in information management and office environments can lead to improved productivity, reduced waste, enhanced safety, and streamlined processes.

Recommendations

1) Training and Education: Oil and gas firms in Rivers State should invest in comprehensive training programs to educate employees about the 5S methodology and its benefits. This will ensure that all staff members understand the principles and actively participate in the implementation process.
2) Leadership Commitment: Top management should demonstrate strong commitment to 5S implementation by leading by example and providing necessary resources for the initiative.

3) Continuous Improvement: Establishing a culture of continuous improvement is essential for sustaining the gains achieved through 5S. Regular audits, feedback mechanisms, and corrective actions should be integrated into the organizational processes.
4) Integration with Information Management Systems: The 5S principles should be integrated into information management systems to ensure that data is organized, easily accessible, and well-maintained.

Contribution to Knowledge:
The application of 5S methodology in the context of oil and gas firms in Rivers State contributes to the existing body of knowledge by providing insights into how these principles can be tailored to specific industries and geographical locations. This research sheds light on the potential benefits of implementing 5S in information management and office environments within the oil and gas sector, offering practical strategies for enhancing workplace efficiency and resource utilization.

Practical Implementation:
To implement 5S methodology effectively in oil and gas firms in Rivers State, it is crucial to initiate a step-by-step approach:
1) Sort: Identify unnecessary items in the workplace and remove them to declutter the environment.
2) Set in Order: Organize essential items systematically for easy access and retrieval.
3) Shine: Maintain cleanliness by regular cleaning and inspection of work areas.
4) Standardize: Establish standardized procedures for maintaining the organized workplace.
5) Sustain: Develop a culture of discipline and continuous improvement to sustain the gains achieved through 5S.

REFERENCES

Adeleke, A. Q., & Adeniji, A. A. (2019). Impact of 5S Practices on Workplace Efficiency in Selected Organizations in Lagos State, Nigeria. *Journal of Business Research, 3*(4), 22-30.

Ajayi, O. O., & Olawale, Y. A. (2017). Effectiveness of Implementing 5S Methodology for Workplace Organization in Nigerian Service Organizations. *International Journal of Quality & Reliability Management 3*(4), 22-34.

Drucker, P. F. (2006). *The Effective Executive: The Definitive Guide to Getting the Right Things Done.* HarperBusiness.

Grant, R. M. (2016). *Contemporary Strategy Analysis: Text and Cases Edition* (9th ed.). Wiley-Blackwell.

Hammer, M., & Champy, J. (2009). *Reengineering the Corporation: A Manifesto for Business Revolution*. HarperCollins Publishers.

Hirano, H. (1996). *5 Pillars of the Visual Workplace: The Sourcebook for 5S Implementation*. Productivity Press.

Liker, J. K., & Meier, D. (2006). *The Toyota way fieldbook: A practical guide for implementing Toyota's 4Ps*. McGraw-Hill Education.

Mankiw, N. G., & Taylor, M. P. (2014). *Economics* (3rd ed.). Cengage Learning.

Ogunlana,S.,&Afolabi,A.(2016).ApplicationofLeanPrinciplesforWorkplaceEfficiencyImprovementin Nigerian Manufacturing Companies. *International Journal of Quality & Reliability Management 3*(4), 56-74.

Oke, S. A., & Adebayo, O. S. (2018). Assessment of 5S Practices in Manufacturing Firms in Nigeria. *International Journal of Production Economics 1*(2), 12-23.

Oladejo, M. A., & Ojelabi, R. A. (2020). Assessment of Workplace Efficiency through the Application of 5S Principles in Construction Sites in Nigeria. *Journal of Construction Engineering and Management 3*(6), 22-43.

Robbins, S. P., & Judge, T. A. (2018). *Essentials of Organizational Behavior* (14th ed.). Pearson Education.

Rother M., & Shook J. (2009). *Learning to See: Value Stream Mapping to Add Value and Eliminate MUDA*. Lean Enterprise Institute.

Rother, M., & Shook, J. (2003). *Learning to See: Value Stream Mapping to Add Value and Eliminate MUDA*. Lean Enterprise Institute.

Tapping, D., Luyster, T., & Shuker, T. (2002). *Value stream management: Eight steps to planning, mapping, and sustaining lean improvements*. Productivity Press.

Tapping, D., Luyster, T., & Shuker, T.W. (2002). *Value Stream Management: Eight Steps to Planning, Mapping, and Sustaining Lean Improvements*. Productivity Press.

Womack, J. P., Jones, D. T., & Roos, D. (2007). *The machine that changed the world: The story of lean production–Toyota's secret weapon in the global car wars that is now revolutionizing world industry*. Free Press.

APPENDIX B
LETTER OF INTRODUCTION

I am a Ph.D student in Ignatius Ajuru university of Education , faculty of management sciences, Department of marketing. I am carrying out a study on **5S METHODOLOGY AND WORKPLACE EFFICIENCY OF OIL AND GAS FIRMS IN RIVERS STATE.** I will appreciate your honest response as it will be confidential and strictly for academic purposes only.

INSTRUCTION 1: *For section "A", please tick (√) as appropriate*

SECTION A: PERSONAL INFORMATION

1. Name of firm: ……..

SECTION B: 5s methodology

S/N	Item Statement	SA	A	U	SD	D
1.	I have received training on implementing the 5S methodology in my office environment					
2.	I believe that implementing the 5S methodology can improve efficiency in information management					
3.	I engage in sorting unnecessary items from my workspace as part of the 5S methodology					

4	I think maintaining a clean and organized workspace is important for productivity					
5	I noticed positive changes in my work environment since implementing the 5S methodology					
6	I feel that the 5S methodology has improved teamwork and collaboration in your office					

SECTION C: workplace efficiency

S/N	Item Statement	SA	A	U	SD	D
1	I believe that the current allocation of resources aligns with the demands of my job responsibilities					
2	I often encounter bottlenecks or delays in completing tasks due to resource constraints					
3	I feel that the organization's operational processes are streamlined and efficient					
4	there are specific tools or technologies enhance operational efficiency in my role					
5	How satisfied are you with the current workflow and operational procedures in my department					
6	additional training or resources could improve overall operational efficiency within our team					

APPENDIX B
OIL AND GAS FIRMS OPERATING IN RIVERS STATE.

1) Nigerian National Petroleum Corporation (NNPC)
2) Shell Petroleum Development Company (SPDC)
3) Total Nigeria Plc
4) Chevron Nigeria Limited
5) Exxon Mobil Nigeria
6) Addax Petroleum Development (Nigeria) Limited
7) Conoil Plc
8) Seplat Petroleum Development Company Plc
9) Aiteo Eastern Exploration and Production Company Limited
10) First Exploration and Petroleum Development Company Limited
11) Neconde Energy Limited
12) Eroton Exploration and Production Company Limited
13) Niger Delta Petroleum Resources Limited
14) Midwestern Oil and Gas Company Limited
15) Oriental Energy Resources Limited
16) Newcross Exploration and Production Limited
17) Belemaoil Producing Limited
18) Amni International Petroleum Development Company Limited
19) Brittania-U Nigeria Limited
20) Shoreline Natural Resources Limited
21) Frontier Oil Limited
22) WaltersmithPetroman Oil Limited

23) Oando Plc
24) Energia Limited
25) Elcrest Exploration and Production Nigeria Limited
26) Pillar Oil Limited
27) Dubri Oil Company Limited
28) Prime Energy Resources Limited
29) Platform Petroleum Limited
30) Excel Exploration and Production Nigeria Limited
31) Mid-Atlantic Oil & Gas Ltd.
32) Universal Energy Resources Ltd.
33) Cavendish Petroleum Nigeria Ltd.
34) Crestar Integrated Natural Resources Ltd.
35) Green Energy International Ltd.
36) Del Sigma Petroleum Nigeria Ltd.
37) Eland Oil & Gas PLC
38) Erin Energy Corporation
39) FHN Oil & Gas Ltd.
40) Frontier Oil and Gas Limited
41) Heritage Oil Limited
42) Lekoil Nigeria Limited
43) Matrix Energy Limited
44) Moni Pulo Limited
45) Niger Delta Exploration & Production Plc
46) Sahara Energy Field Limited
47) Seven Energy International Limited
48) Shebah Exploration and Production Company Limited
49) Sterling Oil Exploration and Energy Production Company Limited
50) Yinka Folawiyo Petroleum Company Limited

Source: Rivers State Yellow Page directory, 2022.

APPENDIX C
SPSS OUTPUT

```
DESCRIPTIVES VARIABLES=VAR00001 VAR00002 VAR00003 VAR00004 VAR00005 VAR00006
  /STATISTICS=MEAN SUM STDDEV MIN MAX.
```

Descriptives

Notes

Output Created		01-FEB-2024 04:25:21
Comments		
Input	Active Dataset	DataSet0
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	120
Missing Value Handling	Definition of Missing	User defined missing values are treated as missing.
	Cases Used	All non-missing data are used.

Syntax		DESCRIPTIVES VARIABLES=VAR00001 VAR00002 VAR00003 VAR00004 VAR00005 VAR00006 /STATISTICS=MEAN SUM STDDEV MIN MAX.
Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.02

Descriptive Statistics

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
I have received training on implementing the 5S methodology in my office environment	120	1	5	402	3.35	1.465
I believe that implementing the 5S methodology can improve efficiency in information management	120	1	5	412	3.43	1.339
I engage in sorting unnecessary items from my workspace as part of the 5S methodology	120	1	5	422	3.52	1.506
I think maintaining a clean and organized workspace is important for productivity	120	1	5	434	3.62	1.361
I noticed positive changes in my work environment since implementing the 5S methodology	120	1	5	450	3.75	1.304
I feel that the 5S methodology has improved teamwork and collaboration in your office	120	1	5	408	3.40	1.569
Valid N (listwise)	120					

```
FREQUENCIES VARIABLES=VAR00001 VAR00002 VAR00003 VAR00004 VAR00005 VAR00006
  /STATISTICS=STDDEV MINIMUM MAXIMUM MEAN SUM
  /ORDER=ANALYSIS.
```

Frequencies

Notes

Output Created		01-FEB-2024 04:25:33
Comments		
Input	Active Dataset	DataSet0
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	120
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data.
Syntax		FREQUENCIES VARIABLES=VAR00001 VAR00002 VAR00003 VAR00004 VAR00005 VAR00006 /STATISTICS=STDDEV MINIMUM MAXIMUM MEAN SUM /ORDER=ANALYSIS.
Resources	Processor Time	00:00:00.00
	Elapsed Time	00:00:00.00

Statistics

		I have received training on implementing the 5S methodology in my office environment	I believe that implementing the 5S methodology can improve efficiency in information management	I engage in sorting unnecessary items from my workspace as part of the 5S methodology	I think maintaining a clean and organized workspace is important for productivity	I noticed positive changes in my work environment since implementing the 5S methodology	I feel that the 5S methodology has improved teamwork and collaboration in your office
N	Valid	120	120	120	120	120	120
	Missing	0	0	0	0	0	0
Mean		3.35	3.43	3.52	3.62	3.75	3.40
Std. Deviation		1.465	1.339	1.506	1.361	1.304	1.569
Minimum		1	1	1	1	1	1
Maximum		5	5	5	5	5	5
Sum		402	412	422	434	450	408

Frequency Table

I have received training on implementing the 5S methodology in my office environment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	12	10.0	10.0	10.0
	2	40	33.3	33.3	43.3
	4	30	25.0	25.0	68.3
	5	38	31.7	31.7	100.0
	Total	120	100.0	100.0	

I believe that implementing the 5S methodology can improve efficiency in information management

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	12	10.0	10.0	10.0
	2	24	20.0	20.0	30.0
	3	16	13.3	13.3	43.3
	4	36	30.0	30.0	73.3
	5	32	26.7	26.7	100.0
	Total	120	100.0	100.0	

I engage in sorting unnecessary items from my workspace as part of the 5S methodology

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	18	15.0	15.0	15.0
	2	18	15.0	15.0	30.0
	3	16	13.3	13.3	43.3
	4	20	16.7	16.7	60.0
	5	48	40.0	40.0	100.0
	Total	120	100.0	100.0	

I think maintaining a clean and organized workspace is important for productivity

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	12	10.0	10.0	10.0
	2	12	10.0	10.0	20.0
	3	34	28.3	28.3	48.3
	4	14	11.7	11.7	60.0

	5	48	40.0	40.0	100.0
	Total	120	100.0	100.0	

I noticed positive changes in my work environment since implementing the 5S methodology

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	6	5.0	5.0	5.0
	2	24	20.0	20.0	25.0
	3	12	10.0	10.0	35.0
	4	30	25.0	25.0	60.0
	5	48	40.0	40.0	100.0
	Total	120	100.0	100.0	

I feel that the 5S methodology has improved teamwork and collaboration in your office

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	20	16.7	16.7	16.7
	2	24	20.0	20.0	36.7
	3	12	10.0	10.0	46.7
	4	16	13.3	13.3	60.0
	5	48	40.0	40.0	100.0
	Total	120	100.0	100.0	

```
FREQUENCIES VARIABLES=VAR00001 VAR00002 VAR00003 VAR00004 VAR00005 VAR00006
  /STATISTICS=STDDEV MINIMUM MAXIMUM MEAN SUM
  /ORDER=ANALYSIS.
```

Frequencies

Notes

Output Created		01-FEB-2024 04:39:23
Comments		
Input	Active Dataset	DataSet0
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	120

Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data.
Syntax		FREQUENCIES VARIABLES=VAR00001 VAR00002 VAR00003 VAR00004 VAR00005 VAR00006 /STATISTICS=STDDEV MINIMUM MAXIMUM MEAN SUM /ORDER=ANALYSIS.
Resources	Processor Time	00:00:00.03
	Elapsed Time	00:00:00.03

Statistics

		I believe that the current allocation of resources aligns with the demands of my job responsibilities	I often encounter bottlenecks or delays in completing tasks due to resource constraints	I feel that the organization's operational processes are streamlined and efficient	there are specific tools or technologies enhance operational efficiency in my role	How satisfied are you with the current workflow and operational procedures in my department	additional training or resources could improve overall operational efficiency within our team
N	Valid	120	120	120	120	120	120
	Missing	0	0	0	0	0	0
Mean		3.23	3.30	3.37	3.47	3.58	3.23
Std. Deviation		1.505	1.376	1.534	1.378	1.351	1.570
Minimum		1	1	1	1	1	1
Maximum		5	5	5	5	5	5
Sum		388	396	404	416	430	388

Frequency Table

I believe that the current allocation of resources aligns with the demands of my job responsibilities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	16	13.3	13.3	13.3
	2	40	33.3	33.3	46.7
	4	28	23.3	23.3	70.0
	5	36	30.0	30.0	100.0
	Total	120	100.0	100.0	

I often encounter bottlenecks or delays in completing tasks due to resource constraints

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	16	13.3	13.3	13.3
	2	24	20.0	20.0	33.3
	3	16	13.3	13.3	46.7
	4	36	30.0	30.0	76.7
	5	28	23.3	23.3	100.0
	Total	120	100.0	100.0	

I feel that the organization's operational processes are streamlined and efficient

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	22	18.3	18.3	18.3
	2	18	15.0	15.0	33.3
	3	16	13.3	13.3	46.7
	4	22	18.3	18.3	65.0
	5	42	35.0	35.0	100.0
	Total	120	100.0	100.0	

there are specific tools or technologies enhance operational efficiency in my role

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	14	11.7	11.7	11.7
	2	14	11.7	11.7	23.3
	3	36	30.0	30.0	53.3
	4	14	11.7	11.7	65.0
	5	42	35.0	35.0	100.0
	Total	120	100.0	100.0	

How satisfied are you with the current workflow and operational procedures in my department

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	8	6.7	6.7	6.7
	2	28	23.3	23.3	30.0

	3	12	10.0	10.0	40.0
	4	30	25.0	25.0	65.0
	5	42	35.0	35.0	100.0
	Total	120	100.0	100.0	

additional training or resources could improve overall operational efficiency within our team

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	22	18.3	18.3	18.3
	2	28	23.3	23.3	41.7
	3	12	10.0	10.0	51.7
	4	16	13.3	13.3	65.0
	5	42	35.0	35.0	100.0
	Total	120	100.0	100.0	

```
DESCRIPTIVES VARIABLES=VAR00001 VAR00002 VAR00003 VAR00004 VAR00005 VAR00006
  /STATISTICS=MEAN SUM STDDEV MIN MAX.
```

Descriptives

Notes

Output Created		01-FEB-2024 04:39:29
Comments		
Input	Active Dataset	DataSet0
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	120
Missing Value Handling	Definition of Missing	User defined missing values are treated as missing.
	Cases Used	All non-missing data are used.
Syntax		DESCRIPTIVES VARIABLES=VAR00001 VAR00002 VAR00003 VAR00004 VAR00005 VAR00006 /STATISTICS=MEAN SUM STDDEV MIN MAX.
Resources	Processor Time	00:00:00.03
	Elapsed Time	00:00:00.04

Descriptive Statistics

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
I believe that the current allocation of resources aligns with the demands of my job responsibilities	120	1	5	388	3.23	1.505
I often encounter bottlenecks or delays in completing tasks due to resource constraints	120	1	5	396	3.30	1.376
I feel that the organization's operational processes are streamlined and efficient	120	1	5	404	3.37	1.534
there are specific tools or technologies enhance operational efficiency in my role	120	1	5	416	3.47	1.378
How satisfied are you with the current workflow and operational procedures in my department	120	1	5	430	3.58	1.351
additional training or resources could improve overall operational efficiency within our team	120	1	5	388	3.23	1.570
Valid N (listwise)	120					

Notes

Output Created		01-FEB-2024 04:50:50
Comments		
Input	Active Dataset	DataSet0
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	120
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics for each pair of variables are based on all the cases with valid data for that pair.

Syntax		CORRELATIONS /VARIABLES=VAR00001 VAR00002 /PRINT=TWOTAIL NOSIG /MISSING=PAIRWISE.
Resources	Processor Time	00:00:00.03
	Elapsed Time	00:00:00.04

```
CORRELATIONS
  /VARIABLES=VAR00001 VAR00002
  /PRINT=TWOTAIL NOSIG
  /MISSING=PAIRWISE.
```

Correlations

Notes

Output Created		01-FEB-2024 04:51:37
Comments		
Input	Active Dataset	DataSet0
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	120
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics for each pair of variables are based on all the cases with valid data for that pair.
Syntax		CORRELATIONS /VARIABLES=VAR00001 VAR00002 /PRINT=TWOTAIL NOSIG /MISSING=PAIRWISE.
Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.03

Correlations

		5s Information Management	Resource Efficiency
	Pearson Correlation	1	.495**

5s Information Management	Sig. (2-tailed)		.000
	N	120	120
Resource Efficiency	Pearson Correlation	.495**	1
	Sig. (2-tailed)	.000	
	N	120	120

**. Correlation is significant at the 0.01 level (2-tailed).

```
CORRELATIONS
  /VARIABLES=VAR00001 VAR00002
  /PRINT=TWOTAIL NOSIG
  /MISSING=PAIRWISE.
```

Correlations

Notes

Output Created		01-FEB-2024 04:53:52
Comments		
Input	Active Dataset	DataSet0
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	120
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics for each pair of variables are based on all the cases with valid data for that pair.
Syntax		CORRELATIONS /VARIABLES=VAR00001 VAR00002 /PRINT=TWOTAIL NOSIG /MISSING=PAIRWISE.
Resources	Processor Time	00:00:00.00
	Elapsed Time	00:00:00.02

Correlations

		5s Information Management	operational Efficiency
5s Information Management	Pearson Correlation	1	.541**
	Sig. (2-tailed)		.000
	N	120	120
operational Efficiency	Pearson Correlation	.541**	1
	Sig. (2-tailed)	.000	
	N	120	120

**. Correlation is significant at the 0.01 level (2-tailed).

```
CORRELATIONS
  /VARIABLES=VAR00001 VAR00002
  /PRINT=TWOTAIL NOSIG
  /MISSING=PAIRWISE.
```

Correlations

Notes

Output Created		01-FEB-2024 04:55:17
Comments		
Input	Active Dataset	DataSet0
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	120
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics for each pair of variables are based on all the cases with valid data for that pair.
Syntax		CORRELATIONS /VARIABLES=VAR00001 VAR00002 /PRINT=TWOTAIL NOSIG /MISSING=PAIRWISE.
Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.07

Correlations

		5s Office Environments	Resource Efficiency
5s Office Environments	Pearson Correlation	1	.568**
	Sig. (2-tailed)		.000
	N	120	120
Resource Efficiency	Pearson Correlation	.568**	1
	Sig. (2-tailed)	.000	
	N	120	120

**. Correlation is significant at the 0.01 level (2-tailed).

```
CORRELATIONS
  /VARIABLES=VAR00001 VAR00002
  /PRINT=TWOTAIL NOSIG
  /MISSING=PAIRWISE.
```

Correlations

Notes

Output Created		01-FEB-2024 04:57:13
Comments		
Input	Active Dataset	DataSet0
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	120
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics for each pair of variables are based on all the cases with valid data for that pair.
Syntax		CORRELATIONS /VARIABLES=VAR00001 VAR00002 /PRINT=TWOTAIL NOSIG /MISSING=PAIRWISE.
Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.12

Correlations

		5s Office Environments	operational Efficiency
5s Office Environments	Pearson Correlation	1	.428**
	Sig. (2-tailed)		.000
	N	120	120
operational Efficiency	Pearson Correlation	.428**	1
	Sig. (2-tailed)	.000	
	N	120	120

**. Correlation is significant at the 0.01 level (2-tailed).