

A-Review of Literature Related to the Concept of Kaizen Philosophy

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Abstract. The document summarizes a variety of Kaizen approach literature that will benefit manufacturers as well as other people in their respective fields. The paper explains how individuals may use this Japanese technique (Kaizen) to increase their output, adaptability, and product quality. Additionally, it explains how to use Kaizen in conjunction with other techniques to boost a certain industry's productivity. Those who are serious about learning about the Kaizen process can benefit from this paper.

Keywords: Kaizen, Quality improvement, Changes for improvement, Workflow.

INTRODUCTION

Kaizen (Ky "Zen") is a Japanese phrase that translates to "continuous improvement" and is derived from the terms "Kai" (continuous) and "Zen" (improvement). Kai and Zen are both translated as meaning change and good or for the better, respectively. The late Dr. W. Edwards Deming, an American statistician, developed the idea of kaizen, or continuous improvement. "Do it better, make it better, and improve it even if it is not broken," according to the Kaizen concept, since if we don't, we can't compete with those who can [24]. Many of the features of Japanese companies that have been credited with their success are included in kaizen. As seen in the graphic, the Kaizen method of operating a firm includes quality circles, automation, recommendation systems, just-in-time delivery, Kanban, and 5S. Kaizen entails establishing standards and then continuously raising them. In order to support the higher standards, Kaizen also entails giving staff the instruction, resources, and oversight they require to fulfill the higher standards and keep their capacity to do so over time.[25]

Inventor of Kaizen Japanese organizational theorist and management consultant Masaaki Imai (Imai Masaaki, born 1930) is well-known for his work on quality management, particularly on Kaizen. Kaizen prioritizes increases in efficiency, effectiveness, and safety. However, individuals that adopt Kaizen will ultimately experience a variety of other advantages, such as: Less waste - inventory is utilized more effectively. A type of employee skill is kaizen. Kaizen and Lean ideas are effectively applied by many businesses to encourage continual improvement throughout the facilities. Kaizen supports businesses globally in reducing waste and streamlining operations. Toyota, which pioneered the practice, is the most well-known Kaizen corporation.[26]



Fig.1 Kaizen – An Umbrella Concept

Fig.2 Principles of Kaizen

Every kaizen tool and every KAIZEN action are based on the 5 Fundamental Kaizen Principles that are depicted in Fig. 2. The 5 guidelines are: know your customer, let it flow, go to the gemba, give people authority, and be transparent are the first three rules.

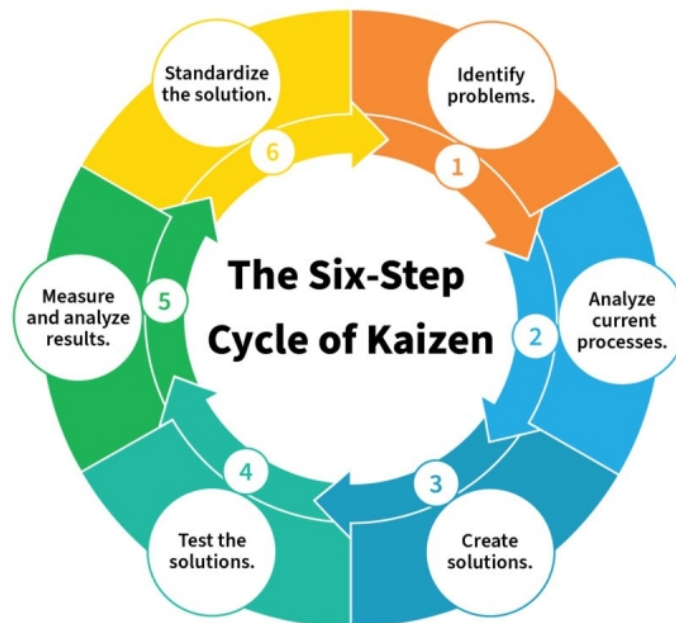


Fig.3 Kaizen Steps

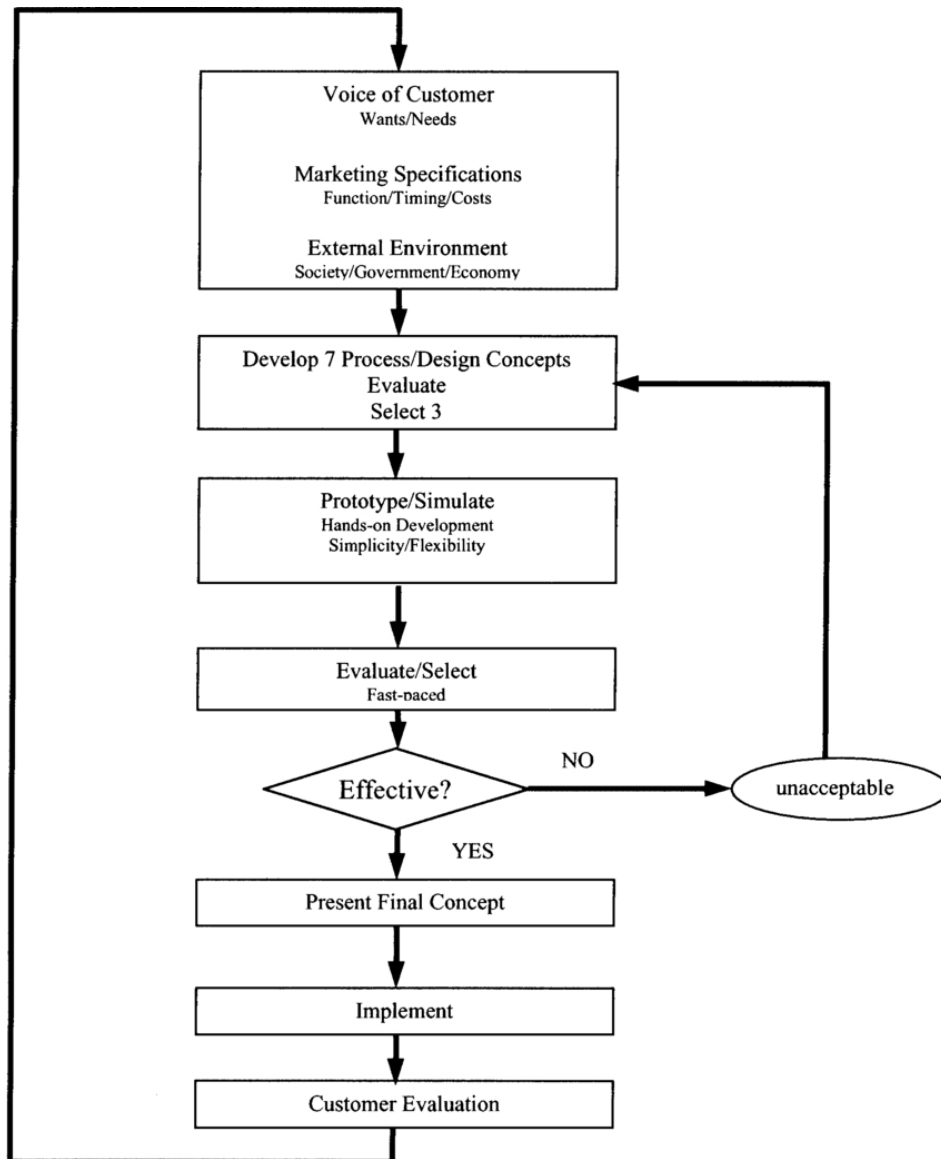


Fig.4 Kaizen Process Overview

Application process of kaizen event basically consists of,

- 1 definition of the area to be improved
- 2 key problem analysis and selection
- 3 identifications of cause of improvement
- 4 improving project implementation
- 5 measuring, analyzing and comparison of the results
- 6 standardized systems.

Kaizen encompasses a wide range of strategies, including Kanban, total productive maintenance, six-sigma, automation, just in time, recommendation systems, and productivity enhancement (Imai, 1986).

LITERATURE REVIEW

Haftu Hailua et al. (2017) [1] “Critical Success Factors Model Developing for Sustainable Kaizen Implementation in Manufacturing Industry in Ethiopia”, The researcher's objective is to identify critical success factors and develop a model for maintaining the look of Kaizen. Peacock shoes are one of the Ethiopian manufacturing companies fighting to maintain Kaizen. The technique is based on empirical testing factor analysis of ideas. A factor analysis using principal components and varimax rotation was applied to recognize the significant success variables. According to studies using multiple regression models, several of the basic success traits have links to success indicators. Because of time restrictions, the inquiry focused primarily on the peacock shoe manufacturing industry. Another limitation is the absence of recent local research revealing critical success factors.

Jose Arturo Garza-Reyes et al. (2020) [2] “Deploying Kaizen Events in the Manufacturing Industry: An Investigation into Managerial Factors”, Although the authors conducted substantial study on Continuous Improvement (Kaizen), little reflection has been documented on the management aspects required to successfully implement Kaizen Events (KEs). This study looks into numerous managerial elements that influence KE implementation. Following a review of the literature and consultation with specialists, the study's goals and six research questions were developed. A survey questionnaire was created and verified with the help of 175 industrial companies. The acquired data was analyzed using a combination of descriptive statistics and one-way ANOVA testing. In addition to other soft' elements, the findings determine: (1) the motivations and hurdles to KE implementation in the pre-implementation stage; (2) the important success elements and problems associated with KE implementation in the implementation stage; (3) the reasons for failure KEs; and (4) the reasons that prevent organizations from running KEs. By examining different stages of KEs implementation, the study gives insights into an under-researched area. The study adds to the contingency and RBV theories by demonstrating the significance of various scenarios and resource planning for KEs implementation. The findings are useful for industrialists who want to drive CIs in their organizations by using KEs.

Asayehgn Desta et al. (2014) [3] “Analysis of Kaizen Implementation in Northern Ethiopia’s Manufacturing Industries”, Kaizen manufacturing practices in Japan have transformed the way businesses deliver goods to their consumers. Many manufacturing companies, similar to Japanese manufacturing enterprises, have aspirations to advance, retain market share, and satisfy their domestic market while expanding into the international market. Building many manufacturers now wish to cultivate a culture of continuous improvement. companies. In other words, a lot of international organizations are attempting to cultivate the habit of continuous improvement through kaizen, as well as to focus on a customer-driven approach to enhance efficiency and product and service quality by accruing incremental gains over time. The impacts of newly adopted kaizen approaches at three case factories in Northern Ethiopia were analyzed using a questionnaire survey, and interviews, and direct observation of workers who had a direct hand in the implementation process. The three pilot case firms were evaluated based on key performance indicators that particularly relate to inputs, outputs, and process variables of the kaizen management system. If 1) senior management and workers really care about the company's immediate and long-term health, 2) work teams have an action attitude, 3) employees are dedicated to the company's value systems, and 5) employees' proposals are utilized as leverage for improvement in the production process. According to the study, the three pilot companies have reduced production costs, improved quality, reduced lead time, increased customer satisfaction, and partially achieved three of the five (5S) kaizen steps: sorting, setting, and shining, but they have yet to learn how to standardize and sustain self-discipline. The study also found that the CEOs in the three pilot cases did not appear to be devoted to kaizen collaboration. Despite the importance of front-line workers in continuous improvement, they are rarely encouraged to engage as a team.

Edna Maryani et al. (2020) [4] “Do Gemba Kaizen and 5s Reinforce Medical Equipment Manufacturing Performance?”, The goal of this study is to examine how the Gemba Kaizen culture and the application of 5S (Seiri, Seiton, Seiso, Seiketsu, and Shitsuke) affect the productivity of the medical equipment manufacturing sectors in Indonesia. Structural Equation Modeling (SEM) is used in this study as a quantitative method with smart PLS software. Data collection methods using online questionnaires and simple random sampling techniques, the number of samples to be used by respondents as many as 300

Medical Equipment manufacturing managers. The findings of this study show that the Gemba kaizen has a favorable and significant impact on the efficiency of the production of medical equipment. The performance of the manufacturing of medical equipment is significantly and favorably impacted by 5S. The research's implication is that kaizen and 5S can be used as a reference for other industries and can be applied to various manufacturers to improve their performance. The originality of this study is in the development of a new model for the impact of applying new kaizen and 5S to Indonesian industries that produce medical equipment.

Dipak P. Gauri et al. (2015) [5] “Application of Lean Kaizen in Productivity Improvement and Safety Measures in A Manufacturing Industry”, Productivity is an extremely important component in every industrial company. The efficiency of a machine is equivalent to the productivity of a manufacturing system. Productivity is an average measure of production efficiency. Highest production efficiency is achieved by producing the needed quantity of goods, of required quality, at the required time, using the best and cheapest way. The fundamental necessity of any industry is to continuously increase product quality and production. To enhance this, employ suitable manufacturing strategy and tools to fulfill corporate goals in order to stay competitive and boost profit. Kaizen, which means "continuous improvement," is the ideal strategy for continuously improving production. Kaizen results in increased labor productivity improvement. The Kaizen idea has been adopted by enterprises worldwide as a means of boosting production values while also enhancing staff morale and safety. Kaizen is a team practice that fosters engagement between workers and management. It concludes that the implementation of Kaizen and transformation at the workplace can lead to increased productivity.

Shaman Gupta et al. (2014) [6] “The 5s and Kaizen Concept for Overall Improvement of the Organization: A Case Study”, The goal of this research is to use some of the 5S and kaizen principles to help small scale manufacturing organizations become more efficient and productive. The work categorizes, analyses, and examines the published material meticulously. The 5S and kaizen guidelines in the organization were examined and applied within the framework of a case study. According to the case study, implementing the 5S and kaizen rules causes significant improvements in the organization, such as increased process effectiveness and efficiency, enhanced process visibility, improved staff morale and safety, decreased delays, searching time, and risky circumstances. 5S and kaizen are strong tools that may be used in any sector, whether micro, small, medium, or big. The implementation of 5S and kaizen has a significant horizontal development and may be implemented in all of the organization's workstations. Each company's improvement program begins with the 5S and kaizen methods. Its outcome is a successful workplace organization. The papers and case studies offered in this paper will help scholars, professionals, and anyone interested in this topic comprehend the importance of 5S and kaizen.

Pratesh Jayaswal et al. (2012) [7] “Implementation of Kaizen and Jishu Hozen to Enhance Overall Equipment Performance in A Manufacturing Industry”, In recent years, there has been a tremendous increase in the maintenance management of physical assets and productive systems to decrease energy and resource waste. Total productive maintenance (TPM) is a tried-and-true strategy for increasing equipment's overall equipment effectiveness (OEE). It comprises eight operations, two of which are targeted improvement and autonomous maintenance to increase equipment performance. These exercises are designed to educate participants on the ideas and philosophy of equipment maintenance while also providing a chance for them to expand their knowledge and abilities. In the case study of a leaf spring manufacturing firm, an attempt is made to discover equipment areas for development; kaizen and Jishu hozen are done to improve overall performance and productivity. To remove the reasons, the why-why approach of root cause analysis is applied. The equipment's OEE is enhanced from 43% to 68%, while labor costs are reduced by up to 43%. Improved OEE in the manufacturing industry resulted in increased availability, better resource use, higher quality goods, and increased employee morale and confidence.

Mayank Dev Singh et al. (2015) [8] “Process Flow Improvement Through 5s, Kaizen and Visualization”, The lean manufacturing philosophy is currently attracting the attention of manufacturers all over the world. The lean manufacturing techniques used in this project include 5S, Kaizen, and Visualization. A tool for ensuring a systematic workplace environment is 5S, Kaizen is continuous improvement through small steps to achieve economic results for the organization, and Visualization is a technique for creating images, diagrams, or animations of the firm's activity that are a helpful and effective way of communicating

for all people associated with the firm. This project aims to make use of these technologies and provide an integrated strategy. Also, to eliminate abnormality in organizations by implementing ergonomics for various employee working positions, which boost productivity, by implementing it at the pipe manufacturing business "Sandvik Asia Pvt. Ltd, Mehsana, Gujarat. "The firm's owner is likewise interested in implementing this idea; so, from an industrial standpoint, this project will teach us how real implementations of lean principles take place.

Amit Kumar Arya et al. (2015) [9] "Assessing the Application of Kaizen Principles in Indian Small-Scale Industry", The purpose of this research is to depict Kaizen implementation in a machine vice manufacturing firm. Kaizen has had a significant influence on manufacturing practices and lead times. In India, a great number of small-scale industries have emerged. Due to fierce rivalry among small businesses, it has been difficult for them to survive. All are dealing with issues such as low output and bad-quality items. **Design/technique/approach** - The methodology used to execute Kaizen in small-scale industries in India. To show cause and consequence, fishbone diagrams have been utilized. The end result has been savings in both money and time. **Findings:** Inventory access time is decreased by up to 87%, while total distance traversed and total time consumed by product are lowered by 43.75 and 46.08 percent, respectively. Workers have established the practice of keeping the workplace tidy. **Limitations/implications of research** - ISO might be linked with Kaizen for additional improvements. **Practical implications** - The study should help practitioners and consultants who want to learn more about Kaizen implementation in India's small-scale industry. **Originality/value** - This study provides several benefits for practitioners in understanding the necessity, implications, and relevance of Kaizen implementation in India's small-scale enterprises. It also bridges the gap between Kaizen theory and practice in real-world working situations in Indian industry.

Ravinder Kumar et al. (2019) [10] "Manufacturing Organization", Kaizen is a continuous improvement practice in manufacturing, assembly, quality, and engineering. The authors of this paper discussed the issues that a leading automobile manufacturing organization was having with the quality of interior car parts such as plastics and rubber. During the study, the author employed a novel technique known as "Global Customer Audit," which is essentially a vehicle audit from the perspective of the final customer for automobile interior parts. During this audit, the author observed various defects and arranged them according to their intensity or magnitude of occurrence, i.e. finding a useful one from a large number of trivial ones, using various quality control tools such as pareto charts, histograms, and check sheets. This paper discusses Using various quality control tools, the author discovered the root cause of defects. Kaizen is used to eliminate defects and continuously improve products and manufacturing processes. Kaizen contributes to making the manufacturing process leaner, simpler, and more efficient. The primary goal of this paper is to discuss the concept of Kaizen and its application in case organizations solve problems that raise significant quality concerns on a daily basis.

Manjunath Shettar et al. (2015) [11] "KAIZEN – A Case Study", The ultimate goal of manufacturing industries is to increase productivity while maintaining high quality. Many manufacturing companies are currently dealing with issues such as high-quality rejection, high inventories, long lead times, high production costs, and an inability to meet customer orders. Many problems can be solved by implementing and practicing the lean production system, rather than using high-tech and high-touch approaches, but by involving people on the shop floor in Kaizen activities. Kaizen is a powerful tool in lean manufacturing. Kaizen is the Japanese term for continuous improvement in performance, cost, and quality. Kaizen makes sure that production procedures are leaner and more effective while also getting rid of waste (problem) in areas where value is added. The primary goal of this paper is to provide an overview of kaizen concepts that are used to transform a company into a high performing lean enterprise. A case study of Kaizen implementation has been discussed.

Sandeepsoni et al. (2015) [12] "Quality Circle: A Methodology to Identify Scope of Quality Improvement Through Kaizen Approach", Kaizen has become one of the most important tools for achieving improvement in any field, such as production, process, quality, and maintenance, in the manufacturing industry. Kaizen can be achieved through improved performance by team players working together to achieve any industry's goal. As a result, quality circles are introduced to keep the improvement process on track through teamwork. This research paper is an empirical study of the Kaizen approach based on the Quality Circle in which extensive literature was studied chronologically. The study's conclusion

implies that the Quality Circle methodology, in conjunction with the Kaizen approach, is a useful tool for improving process, product, and quality in the manufacturing industry. This research paper discusses a case study that provided evidence of product quality improvement in a small-scale industry by using the Quality Circle Methodology.

Leandro Vieira et al. (2012) [13] “Ergonomics and Kaizen as Strategies for Competitiveness: A Theoretical and Practical in An Automotive Industry”, With increased international competitiveness in the automotive industry, companies were concerned about saving money and lowering production costs. Many methods are being developed to reduce raw material costs and waste, as well as activities that add no value to manufacturing processes. The manufacturing system, which processes were hard with little concern for the health and safety of employees and workplace conditions, appears in the early XVII. Following the introduction of the lean manufacturing production system, a new paradigm in terms of production system capable of providing high levels of productivity and quality emerged. The research will be carried out by collecting data "on the spot" and conducting interviews with workers. According to some studies, in companies with a lean system and It is based on the elimination of waste during the manufacturing process. After that, a new way of thinking began, with the creation of a culture of continuous improvement and lean processes with no waste and cost reductions, without ignoring the welfare of workers and improving their working conditions. This essay offers a reflection on the use of ergonomics in a lean production system for the automotive industry. It discusses the benefits and drawbacks of using this methodology for ergonomics along with a methodology based on continuous improvement known as Kaizen.

Puneet Sharma et al. (2015) [14] “Process Improvement by Implementation of Kaizen as A Quality Tool Within Defined Constraints: Case Study in Manufacturing Industry”, The idea of kaizen is to gradually improve a workplace or an organization. Imai, author of KAIZEN - The Key to Japan's Competitive Success, was the first prominent and most frequently cited proponent of kaizen (1986). The kaizen case study in this essay focuses on The ABC Company, a Small Medium Industries (SMI) business that makes nonwoven fabrics. This case study aims to minimize material waste. To conduct the case study, Kaizen steps are used as guidelines, and the PDCA Cycle is used as a problem-solving approach. Why, Work Instruction Sheets, Pareto diagrams, Process Mapping, PDCA Cycle, and brainstorming were used as appropriate tools and techniques. Kaizen implementation has reduced time losses. Furthermore, the sales order processing and production lead times were reduced. These findings demonstrate the effectiveness of the kaizen methodology.

Fasika Bete georgise et al. (2020) [15] “Kaizen Implementation in Industries of Southern Ethiopia: Challenges and Feasibility”, Continuous improvement strategies are a method of making small incremental improvements to the processes of an organization. To remain competitive, these organizations must constantly maintain a low cost of quality, reduce waste, trim production lines, and speed up manufacturing. Companies in both developed and developing countries are attempting to develop the habit of continuous improvement through Kaizen, as well as to focus on a customer-driven strategy to increase productivity. Over time, the quality of products and services continues to improve marginally. Kaizen, a Japanese concept that calls for continuous improvement, has been introduced in Ethiopia to improve organizational performance through increased productivity and quality. Even though there has been a formal interest in implementing Kaizen for twenty years, the results are rarely seen. In this essay, the feasibility and acceptability of Kaizen are examined within Southern Nation and People Regional State organizations. In the Region, 71 stakeholders and 24 pilot businesses participated in a survey that included a questionnaire, interviews, and observational research. The study found that participants were willing to implement Kaizen. The study did identify certain challenges to the sustainability of kaizen initiatives, though. The study's conclusions show that, despite the fact that Kaizen's viability is quite challenging, it is acceptable and suitable among the organizations analyzed. The study also discovered that the enterprise executives did not appear to be committed to Kaizen teamwork. Despite the fact that teamwork is critical for continuous improvement, front-line workers are rarely invited to participate. This paper covers many domains like, Industrial Engineering & Manufacturing; Manufacturing Engineering; Engineering Management; Electromagnetics & Communication; Engineering Economics.

Taposh Kumar Kapuria et al. (2017) [16] “Root Cause Analysis and Productivity Improvement of an Apparel Industry in Bangladesh Through Kaizen Implementation”, The garment industry is leading

the way in improving Bangladesh's economic situation. It began in the late 1970s and is now Bangladesh's leading foreign currency earner. It is without a doubt that the Bangladesh garment industry is improving garment service quality and innovative design features in order to compete in the global market. The global competition in the garment market is changing on a daily basis. Leading garment manufacturers around the world are incorporating new innovative features and techniques to compete in the global market. However, the point is that Bangladeshi garment manufacturers have not remained silent. They are also emphasizing better service quality by incorporating new design elements and employing cutting-edge technology in their garments. Using the Kaizen (Continuous Improvement) approach, this paper's only goal is to pinpoint the underlying factors that contribute to sewing errors in the Bangladeshi garment sector. In a nutshell, the apparel industry's productivity is increasing. "ABONTI Color Tex. Ltd." is the garment manufacturing company we investigated. To identify the top defect items, Pareto Analysis is used. Cause-Effect Analysis assisted in determining the root causes of sewing defects. Kaizen is then used to continuously improve the minimization of sewing defects.

Silvia Pellegrini et al. (2012) [17] “Study and Implementation of Single Minute Exchange of Die (SMED) Methodology in A Setup Reduction Kaizen”, Cutting setup time becomes essential given the urgent need for businesses to improve the efficiency of their product delivery. Setup, also known as changeover, is frequently one of the most time-consuming and non-value-added activities in a manufacturing operation. The goal of this paper is to show how setup time reduction techniques can be used in a medium-sized manufacturing plant to reduce overall process lead time. The project was carried out during a kaizen event and focused on the application of Shigeo Shingo's Single Minute Exchange of Die (SMED) methodology for setup reduction. Deming's Plan-Do-Check-Act (PDCA) cycle, which is based on a scientific approach to problem solving, was used to generate and implement ideas for improvement, with an "idea assessment prioritization matrix" developed to evaluate the soundness of each idea. As a result, the process setup time was reduced from 90 to 47 minutes, and additional opportunities for improvement were identified. The paper also discusses how such techniques can be used not only in a medium-sized plant, but also in a large major manufacturing industry that engages in mass production at multiple global locations.

Manuel F. suarez-Barraza et al. (2008) [18] “Kaizen within Kaizen Teams: Continuous and Process Improvements in A Spanish Municipality”, Researchers want to develop a team learning approach and try to establish inventory development for delivering more quality work. In this paper the author has presented a method of studying kaizen terms in a local Spanish government that has been using kaizen for more than ten years. Twenty teams took part in the study by completing Lingham's Team Learning and Development Inventory (TLI). In addition, researchers interviewed team members to clarify and confirm their quantitative results. This is one of the first studies in Spain's public sector to examine team performance using the Team Learning (TI) and Development(DI) Inventory.

Table of Review Papers

Authors: Maharshi Bhatt et al.
Year: 2014
Paper Title: “ A brief literature review on Total Productive Maintenance”
About the Paper: This paper presents a review of the literature on Total productive maintenance (TPM), which is a positive approach to solving manufacturing problems with the goal of achieving zero defects and thus increasing productivity and quality in manufacturing industries. This paper also discusses the TPM pillars and how they play an active role in the manufacturing system. OEE (Overall Equipment Effectiveness) is used to determine TPM success or failure.

Table. 1 [19]

Authors: Jagdeep Singh et al.
Year: 2009
Paper Title: “Kaizen Philosophy: A Review of Literature”
About the Paper: The authors of this paper have highlighted the ultimate goal for manufacturing industries, and the current scenario is to increase productivity through system simplification, organizational potential, and incremental improvements through the use of modern techniques such as Kaizen. They also provided a brief overview of how the kaizen philosophy has been implemented in various industries and workshops.

Table. 2 [20]

Authors: Mohd Ghazali Maarof et al.
Year: 2016
Paper Title: “A Review of Contributing Factors and Challenges in Implementing Kaizen in Small and Medium Enterprises”
About the Paper: The introduction of ASEAN Economic Community (AEC) in 2015 poses another challenge to the Small and Medium Enterprises (SMEs) in Malaysia to remain competitive in a larger market of ASEAN, apart from the existing effect of globalization from low-cost countries such as China and India. It is important for these SMEs to remain competitive in the market since SMEs contribute significantly to the Malaysian economy. One method to improve business competitiveness is by applying the concept of continuous improvement also known as Kaizen. This paper reviews some selected factors contributing to the successful implementation of Kaizen and its challenges among small and medium enterprises. The factors such as good communication between the top management and their employees, clear corporate strategy, the presence of a Kaizen champion personnel in the organization, good knowledge management and employee’s empowerment were found to contribute to the successful implementation of Kaizen. The review also found that resistance to change, failure to motivate employees, lack of understanding on companies’ strategic path and difficulties in managing continuous improvement itself formed some of the challenges in implementing Kaizen. It appears some similarities exist between small and medium enterprises, and large companies in terms of the contributing factors in implementing Kaizen. Thus, this paper can provide some insights into the factors contributing to successful implementation of Kaizen and its challenges. Hopefully, this paper can be beneficial to the Small and Medium Enterprises as well as other industry players in formulating their continuous improvement or Kaizen strategies.

Table. 3 [21]

Authors: Haryadi Sarjono et al.
Year: 2022
Paper Title: “Systematic Literature Review: Analysis of Determinants of the Quality of BRT Transportation Using the Kaizen Method”
About the Paper: Transportation comes from the Latin word transporter, and has 2 utilities, namely place utility and time utility to facilitate relationships between other communities. Article searches are carried out using the "Google Scholar" and "ResearchGate" databases. The preparation of the research follows the basic steps of research which include determining the research objectives, conducting a literature review on the development of the Kaizen method. This paper finds that the kaizen method has been used in various social fields, transportation and so on. Road transport is a major contributor to CO2 emissions due to dependence on fossil fuels. The main causes of emissions are motor vehicles, buses, taxis, and intercity foam. The main reference for the design and development of Transjakarta is the BRT system. Transjakarta is considered as

one of the cities in the world that has failed to achieve high quality BT services. Building a sustainable transportation system for big cities and complexes is not an easy thing. The Transjakarta BRT system is projected to be a sustainable solution for the ever-increasing needs of urban transportation. Various problems and shortcomings are interconnected such as: Inefficiency (low carrying capacity), physical problems (design and construction), operational issues of mismanagement and political issues of lack of transparency and corruption. Refers to the best practice of the BRT system in the world, development of regulations and plans have been studied and implemented extensively.

Table. 4 [22]

Authors: Lidia Sanchez-Ruiz et al.

Year: 2020

Paper Title: “Scoping Review of Kaizen and Green Practices: State of the Art and Future Directions”

About the Paper: Given the importance that environmental management is acquiring, the main aim of this work is to know what the state of the field kaizen and green practices is at present. A systematic narrative review is conducted in accordance with the PRISMA Statement. Two databases (Web of Science and Scopus) were searched. Finally, after applying the defined inclusion and exclusion criteria, 19 documents were analyzed. Based on the results, it might be concluded that, despite the growing interest in the relationship between kaizen and green practices, this is a topic in the early stages of development, with a clear predominance of case studies. It is, therefore, necessary to develop more research on this kaizen and green issue as improving environmental management is undeniably becoming a must in today’s competitive environment. For instance, more research is needed on the application of kaizen tools as results obtained so far seem not to be conclusive. Additionally, more academic and rigorous studies should be developed on this topic as many of the analyzed papers seem to be clearly created for dissemination among practitioners, some of them lacking the traditional academic structure and scientific method during their development.

Table. 5 [23]

CONCLUSION

According to existing literature, there is a largish literature available on Kaizen philosophy, which provides a broad view of past practices and research carried out around the globe. However, because Kaizen is a widely accepted philosophy in manufacturing industries, more research is needed in this area. The authors believe that the Kaizen philosophy can be applied to a variety of fields such as business, service, and commerce. As a result, fresh researchers in this field have a diverse set of study options. Success stories show that fully implementing the system necessitates team efforts involving every employee in the organization. However, there is a lack of awareness among employees about the various strategies involved in the Kaizen philosophy, as well as the various principles underlying these strategies and their application. Even today, kaizen philosophy can be applied on a personal level as a life management strategy, but the literature on it is scarce. As a result, it could be a new area for kaizen implementation.

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