

APPLICATION OF THE 5S KAIZEN METHOD TO INCREASE PRODUCTIVITY IN KUNINGAN TIMUR VILLAGE, JAKARTA CITY

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ABSTRACT

Increasing productivity is one of the main issues of concern in Indonesia. Thus it is necessary to make efforts to increase productivity sustainably in various sectors. The activity aims to increase the productivity of civil servants and local Kelurahan cadres through the application of the 5S Kaizen method. This activity was carried out at the Kuningan Timur Urban Village Office, Jakarta City from 2 to 4 May 2023 in the form of training. The training was attended by 20 participants consisting of civil servants and local village cadres. The method used in this activity is in the form of lectures, discussions, and direct practice. The results of the activity show an increase in knowledge and skills about 5S Kaizen, from good to very good at first. The direct practice of 5S Kaizen also gives very satisfying results. In the future, it is hoped that there will be a commitment to implementing 5S Kaizen so that productivity can continue to increase.

Keywords: Productivity, 5S Kaizen, Training

1. Introduction

Productivity in an economic context is defined as the amount of output that a person can produce in every working hour, and they are fairly compensated for their efforts. Or in other words, it is referred to as the output value produced by one unit of labor or capital (Adriani & Yustini, 2021). There are two factors that encourage workers to be productive. The first is high-quality education and training. The second factor is the physical and mental well-being of workers when carrying out work obligations. Furthermore, workers with higher education and skills, as well as good physical health, will increase productivity. High productivity will affect the ability of workers to produce decent wages for personal and family needs (Baharin et al., 2020). High-quality workers will help increase company productivity (Hernita et al., 2021).

In 2018 Indonesia's productivity figures reached IDR 82.56 million per worker. In 2018, productivity in Indonesia reached IDR 82.56 million per worker per year. Productivity levels improved the following year but declined in 2020 due to the Covid-19 pandemic. Productivity will start to climb again in 2021, with a target of reaching IDR 86.55 million per worker per year by 2022, the highest level in the previous five years. Cumulatively, the productivity of Indonesian workers has increased by 4.8% between 2018 and 2022 (Ahdiat, 2023). Based on data from the Ministry of Manpower (Kemnaker), DKI Jakarta is the province with the highest labor productivity in 2022, far surpassing other provinces. East Kalimantan is in second place. East Nusa Tenggara, West Nusa Tenggara, Maluku, West Sulawesi, and Bengkulu have the lowest productivity. In 2022, the average national labor

productivity is IDR 86.55 million per worker per year. This is the highest record in the last five years (Databoks.katadata.co.id, 2023).

Increased Productivity can be boosted by using a Kaizen strategy. Kaizen is based on a Japanese philosophy which means continuous improvement (Garza-Reyes et al., 2022). Kaizen is an approach to continuous incremental improvement or change for the better and focuses on the continuous improvement of all functions, systems, and processes within the company (Janjić et al., 2020). Kaizen refers to small changes and endless efforts to change (Rimadias et al., 2023). The most significant effects of kaizen applications are increased productivity, quality, and efficiency, lower costs, elimination of waste, and workplace safety (Janjić et al., 2020).

The application of Kaizen can be done using the 5S method, which is an acronym for five Japanese words which stand for Seiri (Sort), Seiton (Set in Order), Seiso (Shine), Seiketsu (Standardize), and Shitsuke (Sustain). The pioneer of the 5S method is Mr. Takashi Osada (Morey, 2020). The 5S method helps organize the workplace for efficiency, reduces waste, and optimizes quality and productivity through monitoring the organizational environment (Pranav & Vivaan, 2020).

In 5S Kaizen, Seiri (Sort) is removing unnecessary equipment from the workplace. Seiton (Set in Order) is to provide a place for all equipment and all equipment in place. Seiso (Shine) is concerned with cleaning equipment and the work environment. Seiketsu (Standardize) is a set of work standards that everyone must comply with. Finally, Shitsuke (Sustain), namely the discipline to effectively maintain standards from year to year (Rimadias et al., 2023). Kaizen is a prerequisite for creating efficiency and effectiveness. The application of kaizen can increase company productivity (Dibiku, 2023).

Kuningan Timur Village, Setiabudi is located in Setiabudi District, South Jakarta. This sub-district has a population of 7,084 people and an area of 214.70 hectares (Kelkuningantimur, 2023). Kuningan Timur Village is committed to always increasing productivity. This activity supports increased productivity in the East Kuningan Village through 5S Kaizen training. The training was given to 20 participants who were a combination of civil servants and local village cadres.

2. Methods

The implementation of activities in Kuningan Timur Village, Jakarta City in order to increase productivity using the 5S Kaizen method uses 3 (three) stages, namely the pre-implementation, implementation, and post-implementation stages.

In the pre-implementation stage, the Regional Productivity Development Center (P3D), one of the technical implementation units (UPT) at the DKI Jakarta Provincial Manpower, Transmigration, and Energy Office, gave instructions for implementing the 5S Kaizen training in Kuningan Timur Urban Village, Jakarta City. Furthermore, P3D issued a letter of request for sources. After the sources have been obtained, the next step is to analyze the profiles of the training participants. The final stage is preparing training materials.

At the implementation stage, Kuningan Timur Kelurahan, Jakarta City prepared 20 participants, consisting of civil servants and local Kelurahan cadres. The training is designed using teaching methods in the form of lectures, discussions, and hands-on practice guided directly by resource persons. The training is designed to encourage the active participation of all participants. Modules in the form of a collection of material are also given to training participants. The 5S Kaizen knowledge pre-test and post-test were also tested on the training participants to find out how far the participants understood the material provided. The

training will be held face to face from 2 to 4 May 2023 from 09.00 – 16.00 at the Kuningan Timur Village Office, Jakarta City.

In the post-implementation stage, activity evaluation will be carried out. Evaluation is carried out by assessing participants' understanding of the material provided by evaluating the pre-test and post-test scores. Furthermore, an evaluation was also carried out on the results of the 5S Kaizen direct practice in several rooms at the Kuningan Timur village head office.

Productivity improvement training activities through the 5S Kaizen method have achievement targets listed in Table 1.:

Table 1. Activity Achievement Targets

No.	Items	Achievement Target Indicator
1.	The participants	The number of participants is 20 people Participants attend the full training for three days of implementation
2.	Participation of participants	At least 80% of participants actively participate in questions and answers, discussions, and hands-on practice during the training.
3.	Level of Understanding of Participants	At least 80% of participants get a minimum score of 8 at the time of the post-test.
4.	5S Kaizen Hands-On Practice Results	There are at least 3 (three) rooms that meet the 5S Kaizen method at the Kuningan Timur Village Office.

Source: Author (2023)

3. Results and Discussion

The application of the 5S Kaizen method to increase productivity in the East Kuningan Village, Jakarta City is packaged in the form of training by presenting 20 participants. Participants consisted of civil servants and cadres in the Kuningan Timur Village office. Location of activities at the Kuningan Timur Urban Village office, Jakarta City from 2 to 4 May 2023.

On the first day, the activity was opened with a ceremony by the Regional Productivity Development Center (P3D), followed by remarks from Mr. Jefrizal Zahiri representing the Head of the Regional Productivity Development Center (P3D), DKI Jakarta Provincial Manpower, Transmigration and Energy Agency.



Figure 1. Opening of the 5S Kaizen Productivity Improvement Training

Next, a *Pre-Test* was carried out using a *Google form* which can be accessed via *mobile phone*, in which participants were asked to answer 10 questions regarding 5S Kaizen which aims to get an overview of participants' knowledge about 5S Kaizen. If the participant succeeds in answering all the questions correctly, a score of 10 will be obtained. The average score obtained from the *Pre-Test* test is 7.25, meaning that the participant's understanding of 5S Kaizen is quite good.



Figure 2. Presentation of Material by Resource Persons

The event was followed by the presentation of material by resource persons using lecture and discussion methods. The resource person explained the 5S Kaizen method to increase productivity. The 5S method is described as a fundamental component of the Kaizen approach, which is a Japanese management philosophy that focuses on continuous improvement in processes, efficiency, and quality. The 5S method in Kaizen stands for five interrelated steps, namely Seiri (Sort), Seiton (Set in Order), Seiso (Shine), Seiketsu (Standardize), and Shitsuke (Sustain). Each step aims to create a well-organized and efficient

work environment while promoting a culture of discipline and continuous improvement, as explained below:

1. Seiri (Sort): In this step, the workplace is sorted to remove items, tools, equipment, and materials that are not required for the current process. The goal is to eliminate clutter and increase efficiency by having only the essentials available. The benefits of this step are that it reduces waste and makes it easier to identify the items needed.
2. Seiton (Set in Order): This step involves efficiently organizing and arranging the remaining items. Tools, materials, and equipment are placed in designated locations to minimize search time and optimize workflow. Benefits include reduced search time, increased accessibility, and reduced errors due to consistent item placement.
3. Seiso (Shine): The workplace is thoroughly cleaned to maintain a neat and safe environment. Regular cleaning helps prevent equipment damage, increases safety, and increases a sense of pride and ownership among employees.
4. Seiketsu (Standardize): Standardization involves establishing clear and consistent procedures for maintaining the first three S's. This ensures that an organized, clean, and efficient state is maintained over time. The benefits of this step are that it sustains improvements and makes it easier to train new hires.
5. Shitsuke (Sustain): Sustaining improvement and keeping the 5S principles in sustainable practice. This involves continuous reinforcement of the previous steps through regular audits, employee training, and leadership support. The benefits of maintaining 5S include increased long-term efficiency, a culture of continuous improvement, and increased employee morale.

Overall, the 5S methodology in Kaizen helps organizations achieve a more organized, efficient, and productive work environment while cultivating a culture of teamwork, discipline, and continuous improvement. It is a basic element of process improvement, contributing to reduced waste, improved quality, and better overall performance.

During the material presentation, the resource person also opened a question-and-answer forum and discussion. Participants seemed enthusiastic about participating during the debriefing and were active during the discussion.

Activities on the second day, activities are filled with direct practice of implementing the 5S Kaizen method to increase productivity. The resource person directs and guides directly to the participants during hands-on practical activities. The hands-on practice of 5S Kaizen implementation is carried out by dividing the participants into five groups. Each group is required to implement 5S Kaizen in a room prepared for hands-on practice. Participants in each group seemed very enthusiastic about collaborating in implementing 5S Kaizen in the prepared room. In the direct practice process, resource persons always accompany and provide direction to each group.

Activities on the third day, the activity begins with a post-test related to participants' understanding of 5S Kaizen. Post-test results increased, from the previous average score of 7.25 increased to 9.68. These results indicate a sharp increase in participants' knowledge of 5S Kaizen. The activity continued with the presentation of each group for the implementation of 5S Kaizen in the prepared room. Overall the participants were able to explain the 5S Kaizen implementation mechanism. The room that was initially not well organized became tidy with the implementation of 5S Kaizen.



Figure 3. 5S Kaizen Implementation Results



Figure 4. 5S Kaizen Implementation Results



Figure 5. 5S Kaizen Implementation Results

The event was closed by closing remarks from Mr. Paripurna as Head of the Regional Productivity Development Center (P3D) Training Unit, the DKI Jakarta Provincial Manpower, Transmigration and Energy Agency. All training participants received certificates for participation in the 5S Kaizen productivity improvement training.



Figure 6. Resource persons together with training participants

Activity Evaluation

This activity presented 20 participants consisting of civil servants and cadres in the Kuningan Timur Village office environment. Demographically, the trainees are diverse. The profiles of the training participants are shown in Table 2.

Table 2. Profile of the Training Participants

Characteristics	Items	Amount	Percentage
Gender	Woman	17	85%
	Man	3	15%
Age (in years)	17-25	3	15%
	26-35	5	25%
	36-45	6	30%
	46-55	5	25%
	> 55	1	5%
Marital status	Not married yet	4	20%
	Marry	15	75%
	Other	1	5%
Last education	High school or equivalent	11	55%
	D3	1	5%
	Bachelor degree)	4	20%
	Postgraduate (S2)	4	20%

Source: Author (2023)

In Table 2 it can be concluded that the demographics of the participants were diverse, with the majority being female, married with a high school education or equivalent. The evaluation carried out for activities to increase productivity using the 5S Kaizen method in the Kuningan Timur Village, Jakarta City was carried out by conducting an achievement target analysis. When examined closely, it can be concluded that all indicators of activity achievement targets have been achieved.

Table 3. Analysis of Activity Target Achievements

No.	Items	Achievement Target Indicator	Results
1.	The participants	The number of participants is 20 people	Achieved

2.	Participation of participants	Participants attend the full training for three days of implementation At least 80% of participants actively participate in questions and answers, discussions, and hands-on practice during the training.	Achieved
3.	Level of Understanding of Participants	At least 80% of participants get a minimum score of 8 at the time of the post-test.	Achieved
4.	5S Kaizen Hands-On Practice Results	There are at least 3 (three) rooms that meet the 5S Kaizen method at the Kuningan Timur Village Office.	Achieved

Source: Author (2023)

4. Conclusion

The application of the 5S Kaizen method to increase productivity in Kuningan Timur Village, Jakarta City is packaged in the form of training by presenting 20 participants. Participants consisted of civil servants and cadres in the Kuningan Timur Village office. The location of the activity is at the Kuningan Timur Kelurahan office in Jakarta City from 2 to 4 May 2023. This activity was facilitated by the Regional Productivity Development Center (P3D), the DKI Jakarta Provincial Manpower, Transmigration and Energy Agency. The series of activities are expected to increase productivity in the Kuningan Timur Subdistrict, Jakarta City. With the implementation of 5S Kaizen, it is hoped that in the future continuous improvement will be maintained and sustainable.

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