

Implementation of the 5S and K3 Programs in the Vocational High School Environment: Community Service as an Effort to Increase Learning Safety and Productivity

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ABSTRACT

The application of safety induction should not only be carried out in the industrial environment but starting from the educational environment, especially vocational education that is oriented to the working world, it is necessary to introduce practical OSH in accordance with the development of each field of work. (Noviansyah: 2020). Community service to the students of SMK GANESA Demak is carried out from 22 December 2021 to 23 February 2023 using the training method with the main target being students of SMK GANESA Demak. The output of this community service is publication in scientific journals & students at SMK GANESA Demak get increased knowledge and skills in OSH so that they can be applied in everyday life.

INTRODUCTION

Occupational safety and health does not only lead to companies but also in an educational institution is also important, especially occupational safety and health in carrying out a learning practice. Knowledge of occupational safety and health taught by teachers in schools is to maintain the safety and health of students while working at school and in the industrial world and prevent students from the risk of work accidents that may occur. So every workplace should need to implement occupational safety and health, especially in vocational high schools, especially in the practice of students who will be dealing directly with work materials, tools and equipment that have potential hazards (Erfian: 2020).

Schools as workplaces and activities have potential hazards which can be in the form of: fire, potential physical hazards, potential chemical, biological and psychosocial hazards. The SMK curriculum already has a spectrum of education and training subjects related to occupational health and safety education. The word education in this case is more interpreted as K3 culture, because the end of SMK graduates is to become professional workers in the industry. Professional means having productivity and performance excellence, which of course must be healthy and safe first. The study material in this paper includes OSH climate and its components, OSH culture, and especially OSH performance. This performance is often used as a measure of achievement in the implementation of OSH management, even though OSH culture is slightly different (Ismara: 2019).

Vocational High School education as an institution that equips its students to become workforces who are ready to work according to industry standards seeks to implement this 5S culture so as to create learning conditions similar to conditions that take place in industry (Hernita:2020).

The 5S methodology can be applied in vocational high schools to create a safer and more productive learning environment for students such as the results of Diputra's research in 2017 which stated that there was a positive influence on the implementation of 5R on occupational health and safety behavior and also according to Mahasin's research in 2022 which stated that the increase in practice effectiveness was jointly influenced by the variable understanding and application of the 5S industrial culture of 0.38, meaning that 38% had an increase in the effectiveness of classroom practice. By promoting a clean and organized workspace, students can develop good habits that can be carried into their future careers.

Overall, implementing the 5S methodology in vocational high schools can promote a safer and more productive learning environment for students, which can help prepare them for success in their future careers. Additionally, emphasizing the importance of occupational health and safety can help students develop a better understanding of the importance of workplace safety and promote a culture of safety throughout their careers

IMPLEMENTATION AND METHODOLOGY

Implementation of the 5S methodology involves several steps and can be customized to fit the specific needs of an organization or workplace. The following is an implementation method in this community service:

1. Identify the area to be organized: Select the area that will be the focus of the 5S implementation process, in community service at the SMK GANESA, the author chose a practical workshop in the light vehicle engineering department
2. Training : Provide training to student on the 5S methodology, including the purpose, benefits, and steps involved in the process.
3. Provide guidance and support, monitor progress and provide feedback : answering questions, providing resources, and addressing any concerns that may arise during the implementation process, monitor the progress of the implementation process to ensure that the 5S methodology is being carried out effectively and consistently. conducting audits or inspections to assess compliance, offer suggestions for improvement.

RESULTS AND DISCUSSION

Result of initial observations:



Picture 1. Clutter in the workplace

Clutter in the workplace refers to accumulation of unnecessary or disorganized items, materials, and equipment that can interfere with productivity and create an unsafe or unpleasant working environment. here is an example, such as paper piles, unorganized tools, and personal items.



Picture 2 unorganized workplace

An unorganized workplace is a workspace that lacks structure, order, and efficiency in its layout and processes. This can result in a cluttered and chaotic environment that can have a negative impact on productivity, safety, and overall efficiency



Picture 3 unclean work area

An unclean work area is a workspace that is dirty, unsanitary, and has not been properly cleaned. This can create a variety of problems, such as health and safety hazards these conditions can create a slip and trip hazard due to spilled oil that has not been cleaned up



Picture 4 wrong 5S Poster

Standardize in the 5S methodology involves creating standard procedures and visual controls to maintain an organized and efficient workplace. Using posters is a great way to implement visual controls in the workplace. Posters can provide information about training programs for employees. This can include

training on how to maintain the work area, use visual controls, and follow standard procedures. However, existing 5S posters do not provide accurate information about the 5S.

Training 5S methodology

The training is carried out in the following order:

1. Introduce the 5S system: explaining the concept of the 5S system and its benefits. This can include improving productivity, safety, and quality.
2. Explain each step of the 5S system: Go through each step of the 5S system and explain what it involves. This includes Sort, Set in Order, Shine, Standardize, and Sustain.
3. Provide examples: Use examples to demonstrate how the 5S system works in practice. This can include before-and-after photos of work areas that have been organized using the 5S system.
4. Use visual aids: Use visual aids using posters, videos, and infographics to help students understand the 5S system. These visual aids can help reinforce key concepts and make the training more engaging.
5. Use hands-on activities: Provide hands-on activities to help students practice using the 5S system. This can include sorting items, labeling tools, and cleaning work areas.
6. Emphasize the importance of sustainability: Explain that the 5S system is not a one-time event but an ongoing process. Emphasize the importance of sustainability and encourage students to continue using the 5S system even after the training has ended.

Monitoring Progress

Following are the results of the monitoring of the progress carried out:



Picture 5 sorted out workplace

the workplace is free of report books and tools and materials that are not needed in the practicum, but the cloth for cleaning is still left there.



Picture 6 Tools set in order

The necessary tools are already arranged in a logical and efficient manner. tools have provided specific locations for tools, equipment, and materials, and established a labeling system.



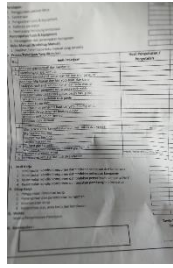
Picture 7 clean workplace

Work area has been thoroughly cleaned, including floors, walls, and equipment. But it is still necessary to develop a cleaning schedule and establish procedures for maintaining cleanliness.



Picture 8 Correct 5S Poster

The correct 5S poster has been provided but it is not informative in providing step by step procedures for carrying out 5S. even though it has been explained in detail in the training PowerPoint, it is also necessary to provide a 5S poster which shows the sequence of procedures for each 5S step.



Picture 8 Worksheet

The 5s program has not become an integral part of every practicum conducted. the use, placement and cleanliness of work tools is only an assessment of work attitudes on worksheets.

CONCLUSIONS AND RECOMMENDATIONS

Implementing the 5S methodology in schools can have a range of benefits, including improved productivity, safety, and quality. results of 5S training in schools:

1. Increased efficiency: By organizing work areas and reducing waste, schools can become more efficient in their operations.
2. Improved safety: A clean and organized work environment can help reduce the risk of accidents and injuries in schools. This can help keep students and staff safe and reduce the school's liability.
3. Higher quality output: By reducing errors and inconsistencies in work processes, schools can produce higher-quality outputs, such as better student work, more accurate reports, and more effective communication.
4. Improved morale: A clean and organized work environment can have a positive impact on the morale of staff and students.

5S must be consistent and sustainable in attitude and work culture Facilities and infrastructure practicum tools aim to shape work attitudes and culture in a consistent and sustainable manner based on 5S principles It is important for schools to make a commitment to the 5S methodology (Hernita :2020). This includes:

1. Providing ongoing training: Schools should provide ongoing training to staff and students to reinforce the importance of the 5S methodology and provide opportunities for continuous improvement.
2. Allocating resources: Schools should allocate resources, such as time and funding, to support the implementation of the 5S methodology. This can include providing cleaning supplies, organizing tools, and other resources needed to maintain an organized and efficient work environment.
3. Encouraging participation: Schools should encourage participation from all staff and students to ensure that the 5S methodology is implemented consistently throughout the school

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