Students Perceptions of The Implementation of Occupational Safety and Health Work on Wood Working Practices

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ABSTRACT

The lack of knowledge and how to use tools when practicing can cause work accidents that harm students and schools that make this research raised. Occupational safety and health are mandatory things at work, which is the main step before starting the activity, so that students can understand the meaning of occupational safety and health itself. The purpose of this study was to reveal students' perceptions of the application of occupational safety and health in Woodworking Practices in the Class XI DPIB Workshop of SMK Negeri 1 West Sumatra. A descriptive research model was used in a quantitative approach. The product was validated by two experts and 30 students who took Woodworking Practice subjects in the July–December 2023 semester. Based on the validation that has been carried out by material expert 1, the result is 80% with good criteria; material expert 2 obtained a result of 81% with good criteria. Based on the results of this study, it can be concluded that students' perceptions of the application of occupational safety and health in woodworking practices in workshops that use descriptive research with quantitative.

INTRODUCTION

Occupational safety and health in practice is an obligation and needs high awareness because through occupational safety and health humans can gain knowledge and skills [1] We must instill awareness from an early age, because when practicing in workshops and industrial workplaces we must instill awareness of K3 behavior. [2] Completeness of facilities and infrastructure is very vital in supporting the smoothness or ease of the practical learning process.

The interaction between teachers and students can also affect learning achievement at school, because smooth interaction will make students not feel reluctant or awkward in the learning process. Supervising teachers who often leave during practicum cause students to wander a lot, play around, and joke around which results in accidents. Accidents in practice are also influenced by the negligence of students who ignore the safety aspects of work. This condition shows that there are still students in schools who have not implemented OSH norms properly.

Based on the results of direct interviews, the teacher concerned stated that students were less careful when carrying out practices in the wood workshop, had not understood the jobsheet before doing the practice, had not used tools when splitting wood using a machine, had not kept the workshop clean, students felt K3 was not important to apply in work. the lack of learning facilities and infrastructure used in the learning process is one of the reasons why students ignore occupational safety and health. Teachers are the driving factor to follow up on students who are not disciplined according to work rules.

Here the teacher is not only focused on students who have not worn work clothes, students are also not allowed to take part in practice if they do not wear work clothes. Meanwhile, students who carry out practices must comply with K3 rules.

METHOD

This research is descriptive research with a Quantitative approach method, this method is used to test the hypothesis that has been set.

This research was conducted in the semester of July to December 2023 at Smk Negeri 1 West Sumatra. The questionnaire was used as a research tool in this study. Research questionnaires to 2 material expert validators were given to 3o students of the Building Modeling and Information Design Program. The formula for data analysis is as follows:

a. Validition Test

The validation questionnaire data obtained from validators is processed using the following formula [.]

$$r_{xy} = \frac{N\sum XY - (\sum X)(\sum Y)}{\sqrt{\{N\sum X^2 - (\sum X)^2\}\{\{N\sum Y^2 - (\sum Y)^2\}}}$$

Description:
r_{xy} = Correlation coefficient
N = Number of samples
X = Item score
Y = Total score
Source: Widoyoko (2012: 147)

The evaluation findings are grouped based on the amount of validity after receiving feedback from the validator, as shown in Table 1[.]

Table 1 : Criteria and Validity

No	Validity Value	Criteria	Conclusion
1	81-100%	Very good	Very good, no revision needed
2	61-80%	Good	Feasible, no revision needed
3	41-60%	Fair	Less feasible, needs revision
4	21-40%	Not Good	Not feasible, needs revision
5	≤20%	Very Poor	Very inappropriate, needs revision

b. Reliability Test

The following formula is used to test the reliability of respondents [.]

$$r_{11} = \left[\frac{k}{k-1}\right]\left[1 - \frac{\sum\sigma_b^2}{\sigma_1^2}\right]$$

Description:
r_{11} = Instrument reliability
K = Number of questions or many questions
$\sum\sigma_b^2$ = Total variance
σ_1^2 = Total variance
Source: Arikunto and Jabar (2010: 180)

The criteria used to determine whether the instrument is reliable or unreliable

Cronbach's Alpha Formula
a) If alpha < 0.20 then very low reliability.
b) If $0.20 \leq$ alpha < 0.40 then low reliability.
c) If $0.40 \leq$ alpha < 0.70 then medium reliability.
d) If $0.70 \leq$ alpha < 0.90 then high reliability.
e) If $0.90 \leq$ alpha < 1.00 then very high reliability.

RESULTS AND DISCUSSION

Here is a descriptive analysis of the presentation, which is divided over indicators of safety of place or room and the environment, safety of labor and others, the safety of materials and tools, and safety of work, among which are:
a.   The area, the room, and the location's security. (Statement No. 1-8)
    Data from the descriptive analysis of the safety indicators of the place, the room, and the environment can be seen in Figure 1.
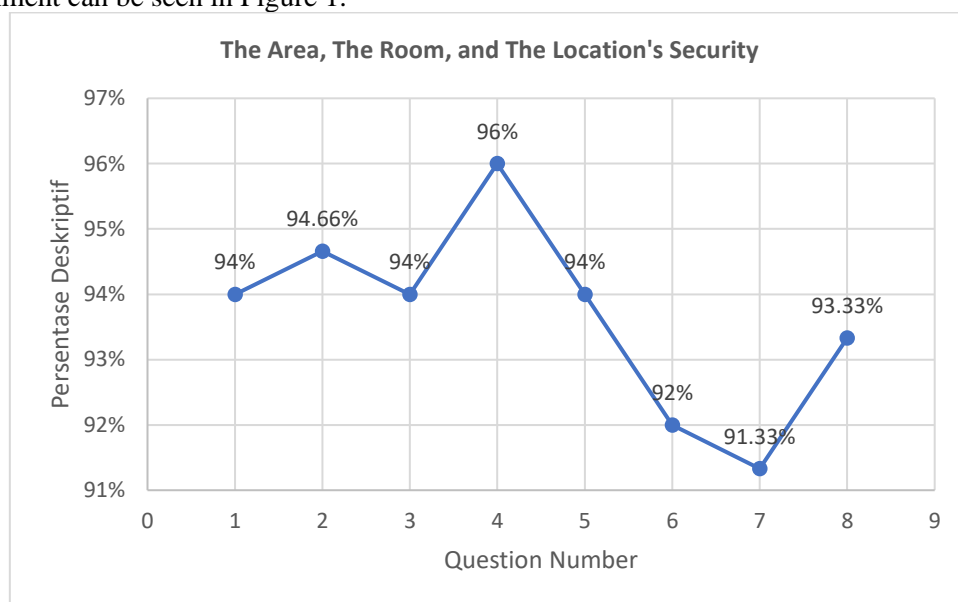

Figure 1 : The area, the room, and the location's security

Figure 1 illustrates that (4) I feel secure and at ease in the wooden working area. The following factors give the statement a "Very Good" rating, more so than the statement element: (1) I have been observing the practicum room's condition when I enter it; (2) the practice is impacted by the description of the wood workshop room; (3) the exhaust air ventilation in the practice; (5) the disposal of residues already in place; (6) I am familiar with the location and use of the fire extinguisher pipe; (7) the machinery and other machines are arranged neatly; and (8) I left the practice room in a messy and filthy state.

b.   Safety of labor and others. (Statement No. 1-8)

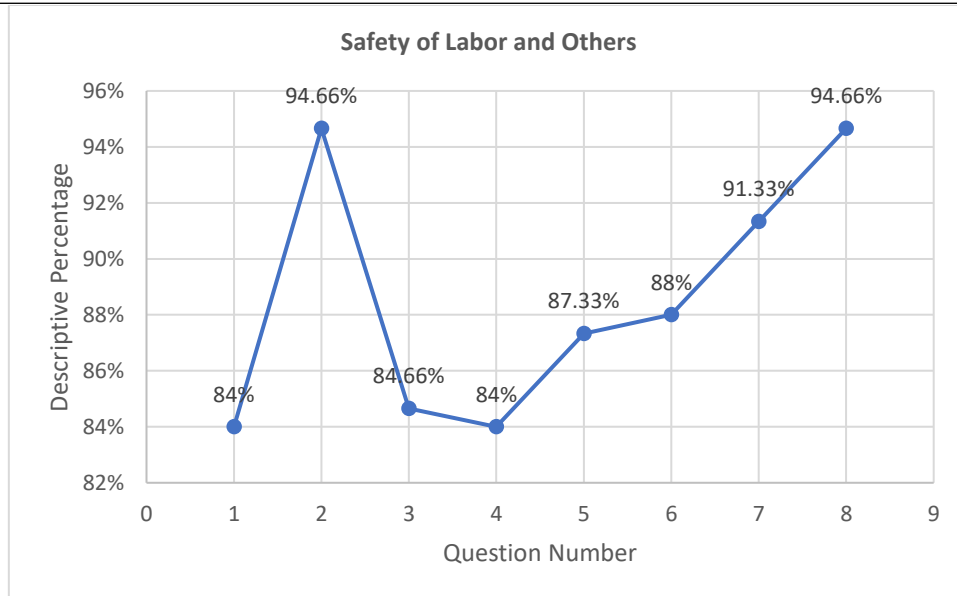Data from the descriptive analysis of labor safety indicators and others can be seen in Figure 2.

Figure 2 : Safety of labor and others.

Figure 4 shows that (8) I use safety precautions when utilizing tools and equipment; this statement has a "Very Good" rating. More important than the questioning element are the following: (1) I am required to use self-defense tools during practice; (2) I use protective equipment (APD) correctly when working in accordance with the workshop SOP; (3) I don't mind the leftover wood fragments scattered in the practice area; (4) I engage in activities other than those prescribed by the instructor teacher; (5) I ask friends to talk to me during the exercise; (6) I can administer first aid in the event of an accident at work; and (7) I pay attention to the instructor's instructions during practice.

c. Safety of materials and tools. (Statement No. 1-8)

Data from the descriptive analysis of the safety indicators of materials and tools can be seen in Figure 3.
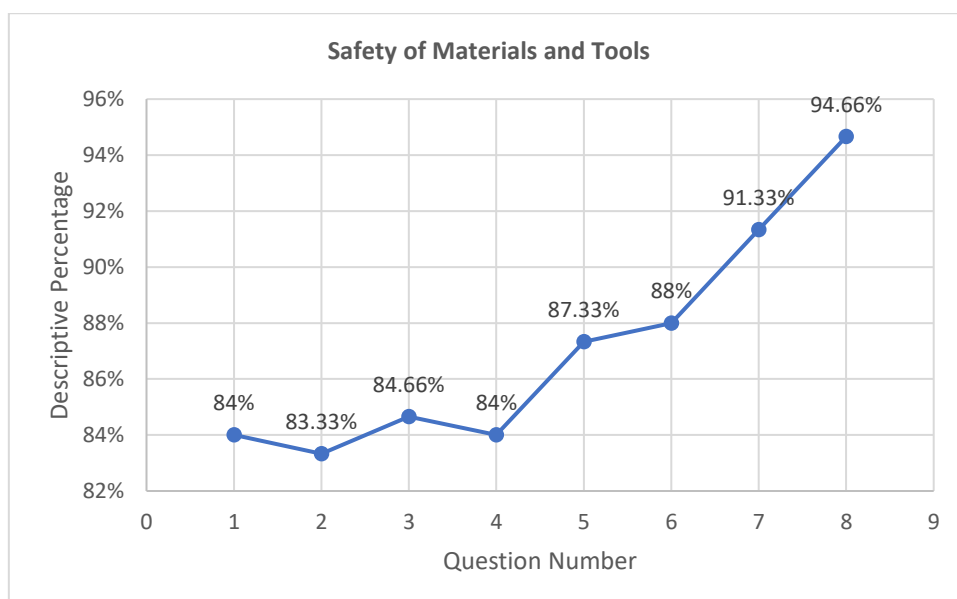

Figure 3 : Safety of materials and tools.

Figure 3 illustrates that (8) I use the tools and materials in accordance with the task sheet. The category that the statement receives, "Very Good," is more prevalent than the statement element: (1) I utilize the practicum equipment in accordance with its intended usage; (2) I pay attention to the instructor's instructions on its use; (3) I double-check the thread that will be booked prior to performing the practicum; and (4) I concentrate on utilizing the completed tool. I clean the tool before using it, (5) the working gear is sufficient and safe to use, and (7) I take caution when using practicum instruments.

d. Security of work. (Statement No. 1-8)

Data from the descriptive analysis of the work safety indicators can be seen in Figure 4.
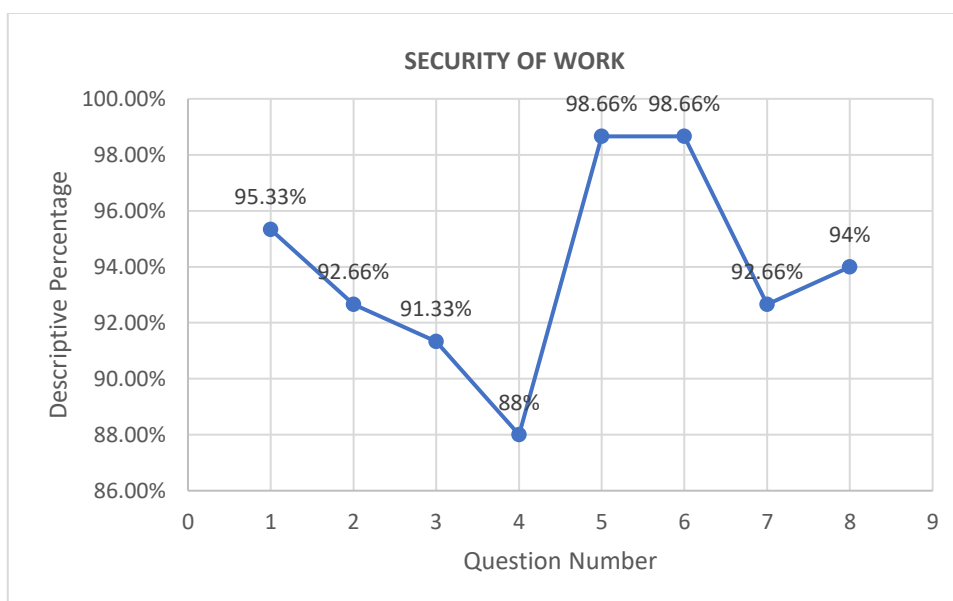

Figure 4 : Security of work

Figure 6 illustrates how statements 5 and 6 receive the category "Very Good," which is more prevalent than the statement element: (1) I seek clarification from the teacher when I'm unsure of something; (2) I ensure that the work is completed in accordance with the assignment; (3) the teacher tutor provides support theory prior to practice; (4) I evade the tutor's supervision during the practice; (7) I concentrate on discussing with friends during the workshop; and (8) I double-check the work in accordance with the work picture.

The following are the results of student perception analysis on the application of occupational safety and health to woodwork practices at the XI grade workshop of the SMK State Department of State 1 West Sumatra, can be seen in Table 10.

Table 2: Presentation descriptive calculation results in 4 variables

Category	The area, the room, and the location's security	Safety of labor and others	Safety of materials and tools	Security of work
Question number	No 1-8	No 1-8	No 1-8	No 1-8
Number of scores	1125	1046	1054	1127

Ideal score	1200	1200	1200	4800
Presentation	93.75 %	87.16 %	87.83 %	93.91%
Description	Very Good	Good	Good	Very Good

Students' perceptions of the application of safety and health at work to woodwork practices in the workshop of the 11th grade of SMK State Department of State 1 West Sumatra can be seen in Figure 5.
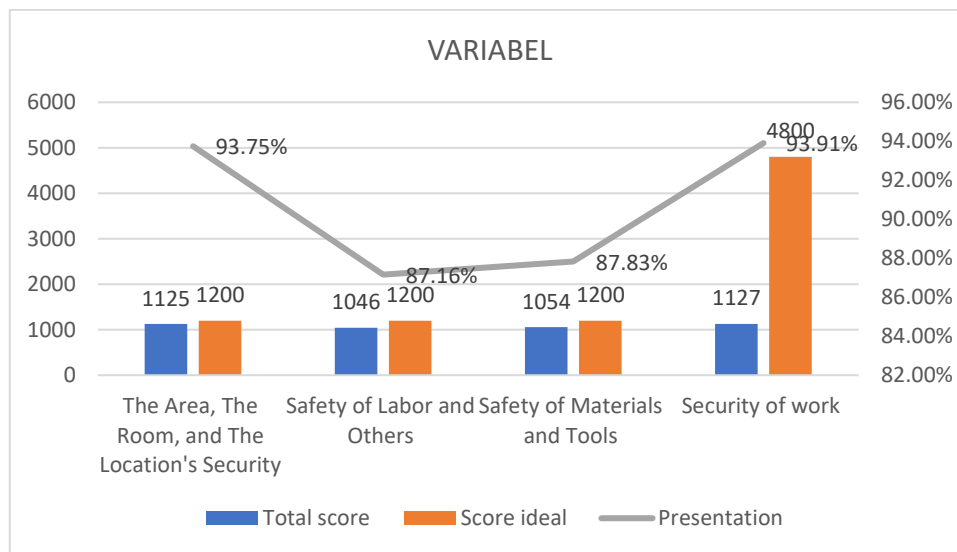

Figure 5: Presentation descriptive calculation results in 4 variables

Here are the results of the descriptive analysis presentations on the overall variables of safety of place or room and environment, safety of labor and other people, safety of materials and tools, and security of work products.
Ideal score calculation:
$$\text{Highest scores x number of items x total number of respondents}$$
$$5 \text{ x } 32 \text{ x } 30 = 4.800$$
DP= n/N x 100%
DP= 4352/4800 x 100%=90.66 %

The value (n) is obtained by summing up the full score of all the subvariables at the time of the study; the value (N) is gained by multiplying the highest score by the number of elements as well as the total number of respondents on the entire subvariable: safety of place or room and environment, safety of the workforce and others, safety of materials and tools, and security of work output. After a descriptive analysis of the presentation, the results were obtained with a score of 90.66% belonging to the category "Very Good."

Discussion
According to research submitted by Restu Yuztiscio (2022) with the title Student Perception of the Students Program Study Education Engineering Building Engineering Against K3 Induction by Companies during Industrial Field Practice (PLI), perceptions of occupational

health and safety on woodwork practices were observed at the XI Class Workshop of DIBIB SMK State 1 Sumatera West. We employ both quantitative and descriptive research techniques in this study. There were two testing sessions for this study: the first involved utilizing an instrument test lift with 30 students from the 2017 class, and the second involved using the test from the test lift with up to 44 students from the 2017 class who had PLI. The K3 General Survey of Activities provided the research findings for each indication, which had a high category score of 87.2%. In the higher category, the K3 Policy and Management System indicator got a score of 87.5%. The aforementioned data indicates that the overall assessment of students' opinions of K3 induction is well-stated, with a high category score of 87.77%.

Student Perceptions About Applications of Health and Safety at Work in Stone and Concrete Practice is a research study by Adi Rama Prasetyo (2018). Students in Class X at SMK State 1 Pariaman's Department of Construction and Construction of Stone and Concrete. The purpose of this descriptive study is to ascertain how SMK State 1 Lifting Class X students in Stone and Concrete Construction perceive the use of health and safety in the workplace. The results of the study show that there is a perception among students of Class X Stone and Concrete Construction that the application of health and security at work of the four indicators that have the largest percentage found on the indicator of safety of materials and tools is in the medium category, which is 50%.

The Impact of Knowledge, Attitudes, and Working Environment Conditions on Applied Occupational Safety and Health Perceptions is a 2018 study by Arief Hartono. With 95 students in the population, the study used an ex post facto methodology. Regression analysis is one method of data analysis, while tests, questionnaires, and observations are used in data gathering. The study's findings demonstrated that knowledge had a 5.6% impact on how people perceived K3 applications. Perception of K3 application was positively impacted by attitudes by 7%. Workplace environments have an 8.3% favorable impact on perceptions of K3 implementation. The combined impact of knowledge, attitudes, and working conditions on K3 perceptions was 15.2%.

Research by Ahmad Nata Fauzi (2022) with the title Student Perceptions Against Knowledge and Attitudes to Use of APD in the Implementation of K3 in Smk State 1 West Sumatra aims at all parties that have a connection to work or practice activity; this means there is no one who has a desire to be unsafe and unhealthy or have an accident while working. So there is no financial loss caused by work accidents that directly affect employees. The results of the research showed that there was a significant impact between the level of knowledge and the benefits of APD on the acquisition of K3 in the machining workshop. This is significant because the double linearity test result with a large 0.000 is < 0.05, and of the test, there were 22.2% of students whose attitude was in the high class, but 68.8% of students had a low attitude.

Student Perceptions Relationship About Demonstration Methods Against Student Learning Outcomes on Lesson Measurement of Light Vehicle Electrical Improvement In Class XI of Smk State 1 Field is a study by Septian Widodo conducted in 2018. This research aims to determine the extent to which student perceptions of demonstration techniques relate to learning objectives for the subject of light vehicle electrical improvement in class XI of SMK State 1 field. Correlational descriptive research is the kind of study that this is. Using Microsoft Excel 2007 and the SPSS Program version 24, study data analysis revealed a correlation coefficient r count > r table (0,450 > 0,312) and for correlations probability test, t count > t table (2.245 > 1,683) at a significant level of 5%.

The results of the research are also in line with the relevant research results obtained with the descriptive formula of the presentation, namely: safety of place or room and environment = 93.75%, very good; security of labor and others = 87.16%, good; safety of materials and tools = 85.44%, good; and security of work output = 93.91%, very good. The result of the evaluation of all 4 variables is 90, 66% in the category "Very Good."

CONCLUSION

Based on the research data that has been processed, it can be concluded that students' perceptions of the application of occupational safety and health to woodworking practices in the workshop of SMK State 1 West Sumatra belong to the category of very good with a score of 90,66%.

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