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Evaluation of The Feasibility of Wood Working Construction Workshop

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ABSTRACT

This study aims to determine the feasibility level of the Wood Work Construction Workshop of the Civil Engineering Department of FT UNP based on the standards of Permendiknas number 40 of 2008, SNI 03-6575-2001, and ISO 9001: 2008. This research approach uses descriptive qualitative research methods and uses a policy evaluation model. The object of this research is the wood working construction workshop. Data collection techniques were carried out by means of observation, interviews, direct measurement and documentation. The research instrument used a checklist that was used during direct measurement. The technique of obtaining data uses a roller meter, lux meter, sound level meter, thermometer and anemometer. The results of this study are the workshop area according to the standard, the area of hand wood working area according to the standard, the area of wood machinery according to the standard, the area of storage and technician areas according to the standard, the lighting level of the wood workshop in the morning according to the standard, at noon according to the standard, and in the afternoon not according to the standard, workshop natural ventilation air circulation for air temperature in the morning is up to standard, in the afternoon and evening is not up to standard, air humidity in the morning and afternoon is up to standard, in the afternoon is not up to standard, air velocity in the morning and afternoon is not up to standard, in the afternoon is up to standard, sound and noise are up to standard, room temperature in the morning is up to standard, The number of students is according to the standard, the number of technicians is not according to the standard, the implementation of workshop practice is according to the standard, the color of the room is according to the standard, the wood workshop practice equipment for hand tools is according to the standard, the working station tool of the type of tool consists of 4 types not according to the standard and 8 types are according to the standard, Workshop facilities for furniture are according to the standard, educational media are according to the standard, fire protection equipment is not according to the standard, first aid kits are according to the standard, personal protective equipment is not according to the standard, workshop support equipment for electrical contact boxes are according to the standard, trash cans are not according to the standard, information data boards are according to the standard, vacuum is not according to the standard.

Keywords: *Evaluation; Wood Work Construction; Workshop.*

INTRODUCTION

The rapid development of science and technology in the current era of globalization has had a significant impact on competition in various sectors. An increase in the level of work

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productivity is expected to occur along with the sophistication of equipment, in line with the availability of adequate human resources (HR) [1]. Human resources can be seen based on quantity and quality aspects. Improving physical quality can be done with the efforts of nutritional health programs while improving non-physical quality can be done through educational program efforts [2].

Education is a process of developing abilities towards certain goals. In general, education has a relationship with the preparation of individuals as prospective workers needed by a particular agency or organization. Supporting this concept, it is emphasized that there are standards that guide the implementation of educational activities, namely Government Regulation No. 19 of 2005 concerning National Education Standards (SNP) [2].

SNP are minimum standards related to the education system in the entire jurisdiction of the Unitary State of the Republic of Indonesia (NKRI). The scope of SNP involves several aspects, including content standards, process standards, facilities and infrastructure standards, management standards, financing standards, and educational assessment standards. One of the higher education institutions in Indonesia is Universitas Negeri Padang (UNP). UNP is a university consisting of several faculties, one of which is the Faculty of Engineering. The Faculty of Engineering is also divided into several departments, one of which is the Civil Engineering Department. The Department of Civil Engineering has several workshops, for example a wood working construction workshop. One of the compulsory courses that must be completed by students of the Civil Engineering Department is wood working practice. Therefore, a wood working construction workshop is needed that can support learning in the course.

The wood working construction workshop is a place that is often used by lecturers and students to practice wood working. The woodworking construction workshop serves as a training ground for students where they are expected to find new ideas or innovative concepts to increase creativity and develop expertise in their fields [3]. The feasibility of a woodworking construction workshop can be measured through the fulfillment of certain standards. In this context, these standards are further elaborated in the Regulation of the Minister of National Education of the Republic of Indonesia No. 40/2008 concerning standards of facilities and infrastructure. In this regulation, it is explained that woodworking construction workshops must meet the minimum facilities and infrastructure standards that have been determined according to the field [4]. This is a government effort to improve the quality of education, so that the quality of graduates from higher education will be better. Therefore, the solution to the problem is to evaluate the feasibility of the wood working construction workshop at the Department of Civil Engineering FT UNP in accordance with the standards of Permendiknas number 40 of 2008, SNI 03-6575-2001, higher education facilities and infrastructure standards, and ISO 9001: 2008.

METHODS

The research method applied in this study is an evaluative descriptive qualitative approach. This evaluative descriptive method aims to provide an accurate and precise description of the actual situation in the woodwork construction workshop space, including the equipment, furniture, lighting, and learning media used. In the evaluative method, this research will evaluate the extent to which the physical and functional conditions of the wood working construction workshop are in accordance with the predetermined plan. The researcher took a

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research site located in the Wood Work Construction Workshop of the Department of Civil Engineering, Faculty of Engineering, Universitas Negeri Padangwhich is located at Jl. Prof. Dr. Hamka, UNP Campus Air Tawar Barat, North Padang District, Padang City, West Sumatra 25171. This research was conducted in the even semester of the 2023/2024 academic year. The object of this research is the Wood Work Construction Workshop of the Department of Civil Engineering, FT UNP.

In this case, the data collection technique in this study was carried out in the following stages: Observation is carried out to gain an understanding of the initial state of the object being investigated. Observation is a complex process, a process that is composed of various biological and psychological processes and that plays an important role is the process of observation and memory [5].

Interviews were used to obtain more detailed information about the wood working construction workshop [2]. Interviews in this study involved lecturers, technicians and students. Direct measurement researchers observe or record phenomena or research objects directly, using appropriate instruments or techniques to obtain accurate and relevant data [6]. Direct measurement in using measuring instruments is the measurement of light on air circulation, sound and noise of the room, room temperature and workshop area. Finally, documentation is used when carrying out research in the form of written numbers and images in the form of reports and information that support research. Documentation is used to clarify or validate observation data [7].

Furthermore, research instruments, instruments used in research in obtaining information carried out with the same measuring pattern [5]. In this study, researchers applied data analysis using descriptive techniques by describing the data collected in detail. The Guttman percentage scale is used in descriptive statistical calculations, where data is calculated to produce a percentage which is then interpreted based on the value obtained. The data analysis technique used by researchers is descriptive statistical data analysis. Descriptive statistics are statistics used to analyze data by describing or describing the data that has been collected as it is [8].

RESULTS

Based on the results of descriptive statistical analysis examines that this study was conducted with the intention to determine the feasibility level of the Wood Work Construction Workshop in the Department of Civil Engineering FT UNP based on Permendiknas standards number 40 of 2008, SNI 03-6575-2001, higher education facilities and infrastructure standards and ISO 9001: 2008 [8]. The following is a summary of the results of data analysis obtained from this study.

Based on the results of direct observations and measurements that have been carried out, the research data obtained regarding the feasibility of the workshop area, lighting, natural ventilation and the number specifications, as well as the condition of the equipment and facilities of the wood working construction workshop at the Department of Civil Engineering FT UNP based on the standard, namely Permendiknas number 40 of 2008, can be seen in table 9 as follows:

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Tabel 1. Results of the feasibility study of the wood working construction workshop

No.	Aspect Evaluation Item	Standard	
		Worthy	Not worthy
1.	Workshop room (area).		
a.	Hand wood working area.	√	
b.	Wood machine work area.	√	
c.	Storage.	√	
d.	Instructor.	√	
e.	Total area of workshop space.	√	
2.	Equipment.		
a.	Hand tools (18).	√14	√4
b.	Machine tools (13).	√9	√4
c.	First aid kit (1).	√1	
3.	Furniture.		
a.	Work table.	√8	
b.	Work bench (stool).	√3	
c.	Tool and material storage cabinet.	√3	
4.	Educational media (1).	√1	
5.	Other equipment.		
a.	Electrical socket(18).	√18	
b.	Trash can(2).		√2
c.	Information data board(1).	√1	
d.	Vacuum.		√
e.	FIRE EXTINGUISHER(1).		√1
f.	PPE (Personal Protective Equipment).		√
g.	Technician(1).		√1
6.	Student capacity for practical activities(16)	√16	
7.	Lighting and air circulation system.	√ Morning /Afternoon	√ Evening
8.	Room sound and noise.	√	
9.	Natural ventilation system of the room.	√	
10.	Room temperature.	√ Morning	√ Afternoon /Evening
11.	Room color.	√	
12.	Implementation of workshop practice.	√	

1. *Workshop Area Condition*

a. Woodworking Construction Workshop Room

The size of the wood working construction workshop area according to the regulation of the minister of national education number 40 of 2008 which has a capacity of 16 students is 304 m2, then the percentage of achievement of the standard area with the one in the field is 105.92%. This is categorized as a woodworking construction workshop area as a whole according to the standard. The following is a description of the measurement of the wood working construction workshop area in the Department of Civil Engineering, FT UNP, which is listed in Figure 1 below:

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Figure 1. Measurement of the woodworking construction workshop area

The woodworking construction workshop has an area of 322 m² for 16 students while it is stated in Permendiknas number 40 of 2008 that the minimum area for woodworking construction workshops is 304 m² for 16 students. The difference is very large. If the needs for 16 students are calculated, the woodworking construction workshop should have an area of 320 m². The woodworking construction workshop area is large enough to accommodate practical students.

The size of the hand wood working area according to the regulation of the minister of national education number 40 of 2008 which has a capacity of 16 students is 128 m2, the percentage of achievement of the standard area with the one in the field is 98.43%. This is categorized as the area of the hand wood area according to the standard. The following is a description of the measurement of the hand wood working area of the wood working construction workshop of the Civil Engineering Department, FT UNP, which is listed in Figure 2 below:

Figure 2. Measurement of the area of the hand wood working area

The hand wood working area mentioned in Permendiknas number 40 of 2008 the minimum area for this work area is 128 m² for 16 students. Meanwhile, the area

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obtained is only 126 m² for 16 students. The required area for this work area should be 129 m². The difference in area is very small between the standards, availability and needs. This is due to the limited land owned by the wood working construction workshop so that the hand wood working practice room only has an area of 126 m².

The size of the wood working area according to the regulation of the minister of national education no. 40 of 2008 which has a capacity of 8 students, the percentage of achievement of the standard area with the one in the field is 101.56%. This shows that the wood machine work area is up to standard. The following is a description of the measurement of the work area of the wood working construction workshop machine Department of Civil Engineering FT UNP listed in Figure 3 below:

Figure 3. Measurement of the wood working area

The wood machine work area mentioned in Permendiknas number 40 of 2008 the minimum area for this work area is 64 m² for 8 students. Meanwhile, the area obtained is only 65 m² for 8 students. The required area for this work area should be 70 m². There is very little difference in area between the standards, availability and needs. This is due to the limited land owned by the wood working construction workshop so that the practice room only has an area of 65 m².

The size of the storage room area obtained the percentage of achievement of the standard area with the one in the field of 103.13%. This means that the storage area of the wood construction workshop is in accordance with the standard. The following is a description of the measurement of the storage area of the wood working construction workshop of the Civil Engineering Department, FT UNP, which is listed in Figure 4 below:

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Figure 4. Measurement of storage area

The storage room mentioned in Permendiknas number 40 of 2008 the minimum area for this room is 24 m² for 16 students. While the available area is only 24.75 m² for 16 students. The required area for this room is 25 m². There is very little difference in area between the standards, availability and needs. This is due to the limited land owned by the wood working construction workshop so that the practical storage room only has an area of 24.75 m².

The size of the instructor/technician room area obtained the percentage of achievement of the standard area with the one in the field of 91.6%. This is categorized as the area of the instructor/technician room of the wood construction workshop according to the standard. The following is a description of the measurement of the area of the technician room of the wood working construction workshop of the Civil Engineering Department, FT UNP which is listed in Figure 5 below:

Figure 5. Measurement of technician room area

The technician room mentioned in Permendiknas number 40 of 2008 the minimum area

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for this room is 24 m² for 3 technicians. While the area obtained is only 22 m² for 1 technician. The required area for this room is 25 m². The difference in area is not so far between the standards, availability and needs. This is due to the limited land owned by the wood working construction workshop so that the technician room only has an area of 22 m².

b. *Wood Workshop Room Lighting*

The results of the analysis show that the lighting level in the wood working construction workshop room is not up to standard. This is because when carrying out measurements at the three points of the wood working room area there are differences in the amount of light entering the workshop area.

In the morning, the sun rises from the east and the front of the woodwork construction workshop of the civil engineering department of FT UNP faces north or leads to the automotive workshop, so the lighting level is low. The average natural lighting level for the morning is 596 lux. Therefore, in the morning, the light level of the wood workshop is within the standard. This is because most of it relies on the open space to the north. so in the morning there is reflected light from the east so sometimes the natural light coming through the glass vents causes glare.

During the day, the average natural lighting level is 1,031 lux, therefore during the day the light level of the wood workshop room meets the standard. This happens because the incoming light is so bright and hot due to the sun being in the right position above the head of the building.

In the afternoon, the average natural lighting level is 406 lux, therefore in the afternoon the light level of the wood workshop room is not up to standard. In the afternoon, the sun is more inclined to the west so that sunlight is not maximized into the workshop. The following is an overview of light measurements in the wood working construction workshop room of the Department of Civil Engineering FT UNP, as listed in figure 6 below:

Figure 6. Workshop light measurement

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c. Natural Ventilation of Wood Workshop Room

The results of the analysis show that the air humidity level in the wood working construction workshop room at the Department of Civil Engineering FT UNP is according to the standard in the morning, afternoon and evening. The average morning air humidity level of 58.84% means it is feasible. The average daytime air humidity level of 57.68% means it is feasible. The average afternoon air humidity level of 58.44% means it is feasible.

The results of the analysis show that the level of wind speed in the wood working construction workshop room at the Department of Civil Engineering FT UNP is less in accordance with the standards in the morning and afternoon and in the afternoon according to the standard. The average wind speed level in the morning was 0.1 m / s with conditions not felt. The average wind speed level during the day was 0.2 m / s with conditions not felt. The afternoon average wind speed level is 0.27 m/s with pleasant conditions.

Therefore, based on the level of air humidity in the wood working construction workshop room at the Department of Civil Engineering FT UNP, most of the morning, afternoon and evening are categorized according to the standard. While for the level of wind speed in the wood working construction workshop room at the Department of Civil Engineering, FT UNP, most of the morning and afternoon are quite standardized while in the afternoon it is categorized as standardized.

The following is an illustration of the measurement of air circulation in the ventilation of the wood working construction workshop room of the Department of Civil Engineering FT UNP, as listed in figure 7 below:

Figure 7. Measurement of air circulation in the ventilation room

d. *Sound and Noise of Workshop Room*

The results of the analysis show that the sound and noise in the wood working construction workshop room are in accordance with the standard. This is because the

respective measurement results are 84.8 db (decibels), which means that it does not exceed 85 db for 8 hours of work in the standard.

The woodworking workshop follows established sound and noise level standards to ensure a safe and comfortable working environment for workers and learners. This includes the use of equipment and machinery with controlled noise levels, such as the use of cutting tools with efficient exhaust systems and ear protection equipment to reduce the impact of noise.

The following is a description of the measurement of sound and noise in the wood working construction workshop room of the Department of Civil Engineering, FT UNP, as listed in Figure 8 below:

Figure 8. Sound and noise measurements

e. Room temperature

The results of the analysis show that the room temperature in the wood working construction workshop shows that it meets the standard in the morning while in the afternoon and evening it does not meet the standard. The average room temperature level in the morning of 29.5°C means that it is in accordance with the standard. The average daytime room temperature level of 33°C means it is not up to standard. While the average room temperature level in the afternoon of 32 ° C is not according to the standard.

This means that the woodworking workshop has a standard room temperature that is set to create a comfortable working environment and in accordance with the needs of the production process. Usually, the room temperature in the woodworking workshop is kept stable within a comfortable range for workers and learners, usually between 18°C and 24°C.

The following is an overview of room temperature measurements in the wood working construction workshop of the Department of Civil Engineering FT UNP, as listed in figure 9 below:

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Figure 9. Workshop room temperature measurement

f. Learner capacity

The number of learners for practical woodworking activities in the woodworking construction workshop is 16 per class. Then these 16 people are divided into two rombel or groups. So that this assessment is categorized according to the eligibility standards of the applicable Permendiknas standard number 40 of 2008. This shows that in the practice of woodworking workshops, each class has a number of students who study according to the established standards.

The following is an overview of the atmosphere of learner capacity in the wood working construction workshop of the Department of Civil Engineering FT UNP, as listed in figure 10 below:

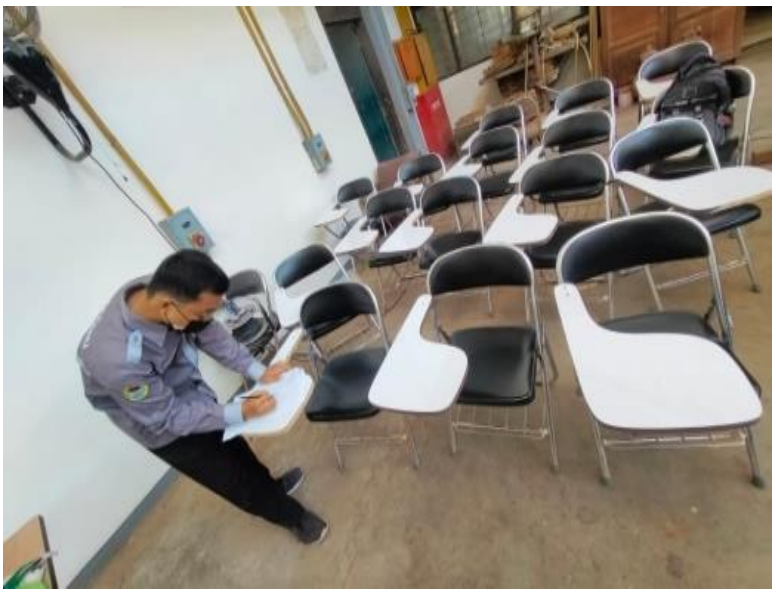

Figure 10. Capacity of students

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g. Technician

The technician in the wood working construction workshop at the Department of Civil Engineering FT UNP reviewed was only 1 technician so that this assessment was categorized as not meeting the eligibility standards of the Permendiknas standard number 40 of 2008.

Each technician has specialized skills and they work together to achieve quality results in every job. They work as a team to handle various wood construction projects that include cutting, joining and finishing the final product. The following is an overview of the technicians in the wood working construction workshop of the Department of Civil Engineering FT UNP, as listed in figure 11 below:

Figure 11. Technicians in wood workshop

h. Implementation of practicum

The implementation of practicum in the wood working construction workshop of the Civil Engineering Department of FT UNP is 2 days a week, and there are differences in the vulnerable duration of practice time for the two study programs, namely D3 practice only up to half a day, namely on Tuesday and Thursday while S1 practice is carried out full day and carried out on Monday and Saturday so that it is assessed according to the eligibility standards of Permendiknas standard number 40 of 2008. This is due to the difference in the number of credits load from each study program.

i. Color

The paint color of the wood working construction workshop room in the Department of Civil Engineering FT UNP is pale yellow and warm, this is based on the opinion of a researcher who conducted research on pale yellow colors suitable for wood workshops named Albert H. Munsell. So it can be assessed that the paint color in the workshop room is in accordance with the eligibility standards of Permendiknas standard number 40 of 2008. This can help and facilitate the identification and navigation of technicians and students in the workshop.

j. Equipment in the workshop room

For the double working station equipment, there are 13 types of tools whose efficiency is 85% with decent conditions, but judging from the number of tools each double

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working station equipment in the field amounts to one unit/type, while the efficiency standard is 1 set/area which means the number of tools in each double working station equipment in terms of quantity is less than the standard which should be at least two units each.

For double working station equipment, there are 11 types of tools whose efficiency is 100% with very feasible conditions, meaning that in terms of the number of tools, each double working station equipment has more than two, which means that in terms of quantity it meets the standard.

Based on the observation data in appendix II, out of 13 hand tools, only paintbrushes and brushes are not up to standard. In addition to these tools, there are many tools whose numbers do not meet the standard and many tools that are no longer functioning. Like the brushes of the 10 existing only 2 are functioning. The following is an overview of hand tools and other fittings in the wood working construction workshop of the Department of Civil Engineering FT UNP listed in figure 12 below:

Figure 12. Iron hammer

k. Facilities in the wood workshop room

The results of the analysis of the amount of furniture in the wood working construction workshop of the Department of Civil Engineering, FT UNP show that there are 2 pieces of furniture that do not meet the eligibility standards, namely work benches (stools) and storage cabinets for practical materials while the workbenches are categorized according to the eligibility standards. This shows that there are some furniture that has not reached 100% or not according to standards.

Educational media, in the form of a white board, has 1 set per workshop. So that the assessment is categorized according to the eligibility standard. This is sufficient to explain learning concepts, describe the dimensional elements of wood joints in the process of assembling a piece of furniture, or provide visual instructions to students.

Fire extinguisher, in the wood working construction workshop reviewed there is only 1 unit of fire extinguisher so the assessment is categorized as not according to the eligibility standard. This results in a lack of designer attention in the concept of

designing safety facilities in the workshop, and as seen the wood work construction workshop in the civil engineering department of FT UNP is large but for workshop safety equipment is still minimal.

First aid kit equipment, in the wood working construction workshop reviewed only has 1 unit of first aid kit located in the technician's room so that the assessment is categorized according to the eligibility standards. This first aid kit equipment is fully equipped and organized, so that the comfort of the wood working construction workshop at the Department of Civil Engineering FT UNP can improve personnel safety and be ready to overcome emergency situations or injuries that may occur during the wood working process.

Personal Protective Equipment (PPE), in the wood working construction workshop reviewed there is no personal protective equipment worn by students when carrying out practice so that the assessment is categorized as not meeting the eligibility standards. This states that the absence or incompleteness of PPE (Personal Protective Equipment) in the wood working workshop at the Department of Civil Engineering FT UNP can have various serious consequences for the health and safety of students.

The following is a description of the types of furniture in the wood working construction workshop of the Department of Civil Engineering FT UNP, as listed in figure 13 below:

Figure 13. Table and chair

l. Other supporting equipment

Electrical contact boxes, in the wood working construction workshop have 2 each/area. So the assessment is categorized according to the feasibility standard. It is designed to provide safe and easy access to electricity in the work area. In addition to being designed, the electrical socket is installed on each wall or in a place that is easily accessible to the wood working area.

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Trash cans, in the wood working construction workshop have 2 trash cans of the bucket basin type and plastic barrels where the assessment is categorized as not standard according to feasibility. This refers to the shape of the condition of the trash can in the wood construction workshop of the civil engineering department is not so hygienic.

Information data board, in the wood work construction workshop reviewed has 1 unit / workshop. So that the assessment is categorized according to the eligibility standards. This shows that the information data board in the wood working workshop at the Department of Civil Engineering FT UNP is an important communication tool to convey important information to workers, students, and workshop visitors.

Vacuum, in the reviewed wood working construction workshop does not have a vacuum tool so the assessment is categorized as not meeting the eligibility standards. This causes the accumulation of material scraps after completing the wood construction project.

This study aims to determine the feasibility level of the Wood Work Construction Workshop of the Department of Civil Engineering FT UNP based on Permendiknas standard number 40 of 2008, SNI 03-6575-2001, higher education facilities and infrastructure standards and ISO 9001: 2008. Through data collection from several measuring instruments used during the research that there are parts of the facilities and infrastructure of the wood working construction workshop of the Department of Civil Engineering FT UNP which are categorized according to standards and not according to eligibility standards.

As a whole, it can be told that a good wood working construction workshop should be in accordance with the standard. However, in 2024, the wood work construction workshop of the Department of Civil Engineering FT UNP experienced several problems. found some information in the wood work construction workshop not according to standards. Therefore, researchers conducted research in the wood working construction workshop in accordance with the standards of Permendiknas number 40 of 2008, SNI 03-6575-2001, college facilities and infrastructure standards, and ISO 9001: 2008. Where in this study there are several items that are evaluated, including 20 indicators.

First, the area indicator of the wood working construction workshop, where it is found that the wood working construction workshop is according to the standard, both the hand wood working area, wood working machine area, storage room and instructor/technician room. Then the first indicator has met the eligibility standards. Furthermore, the second indicator is related to the lighting level. After measurement, it is found that the lighting level in the woodworking construction workshop has two categories of eligibility. First, the morning meets the standard. Second, the afternoon and evening do not meet the standard. Therefore, this result states that the morning meets the standard while the afternoon and evening do not meet the eligibility standards.

The third indicator is the natural ventilation of the wood workshop room. After measurement, it was found that the level of air humidity and the level of wind speed entering the natural ventilation of the room have most of the morning, afternoon and evening meet the standard. While the level of incoming wind speed in the morning and afternoon moderately meets the standard while the afternoon meets the standard. Therefore, this result states that the air

humidity level meets the standard while the wind speed level partially meets the eligibility standard. It is found that the sound level in this woodworking construction workshop meets the standard. Then the fourth indicator has met the eligibility standard.

Furthermore, the fifth indicator is room temperature. After measurement, it is found that the room temperature in the workshop has two categories of eligibility. First, in the morning it meets the standard. Second, in the afternoon and evening it does not meet the standard. Therefore, this result states that the morning meets the standard while the afternoon and evening do not meet the eligibility standards. Next is the sixth indicator of student capacity. Where after checking the student seats during the research, it was found that the number of students met the standard. So that the indicator of student capacity has met the eligibility standards.

Furthermore, the seventh indicator is the number of technicians. Where after a review it was found that the number of technicians in the wood working workshop did not meet the standard. So that the indicator of the number of technicians has not met the eligibility standards.Next, the eighth indicator of the level of practice implementation. Where after asking one of the technicians in the wood workshop it was found that the level of implementation of student practice in the wood workshop met the standard. So that the indicator of the level of practice implementation has met the eligibility standards.

The ninth indicator is the color of the room. Where after going through the research it was found that the color of the wood working construction workshop room met the standard. So that the indicators of the color of the room have met the eligibility standards. Next is the tenth indicator of room equipment. Where after going through research conducted by checking that hand tools in the wood construction workshop do not meet the standards. So that the indicators of the practical equipment of the wood workshop room have not met the eligibility standards. Eleventh indicator of the amount of furniture. Where after research is done by checking that the amount of furniture in the wood workshop has two categories of eligibility. First, the types of furniture work benches (stools) and material cabinets do not meet the standards while for workbenches meet the standards. So that the indicator of the amount of furniture in the wood construction workshop has not met the eligibility standards.

The twelfth indicator is educational media. Where after research it was found that the educational media in the wood working construction workshop met the standards. So that the educational media indicators have met the eligibility standards. Thirteenth indicator APAR (fire protection equipment). Where after going through the research it was found that APAR (fire protection equipment) in the wood working construction workshop did not meet the standards. So that the indicators of fire protection tools have not met the eligibility standards. Fourteenth indicator first aid kit. Where after research it was found that the first aid kit in the woodworking construction workshop met the standard. So that the first aid kit indicator has met the eligibility standards.

Fifteenth indicator of PPE (personal protective equipment). Where after research it was found that PPE (personal protective equipment) in the wood working construction workshop did not meet the standards. So that the PPE indicator (personal protective equipment) has not met the eligibility standards. Sixteenth indicator of electrical contact boxes. Where after research it was found that the electrical contact box in the wood working construction workshop met the standard. So that the indicator of the electrical contact box has met the eligibility

standards.Seventeenth indicator of the trash can. Where after going through the research it was found that the trash cans in the wood working construction workshop did not meet the standards. So that the trash can indicator has not met the eligibility standards.

Eighteenth indicator of information data board. Where after going through the research it was found that the information data board in the wood working construction workshop met the standard. So that the information data board indicator has met the eligibility standards.Nineteenth indicator vacuum. Where after going through the research it was found that the vacuum in the wood working construction workshop did not meet the standards. So that the vacuum indicator has not met the eligibility standards. Twentieth indicator of noise level. Where after going through the measurement it was found that the noise level of the woodworking construction workshop met the standard. So that the noise indicator has met the eligibility standards.

Based on the 20 indicators of this evaluated item, it was found that 10 indicators met the eligibility standards. Meanwhile, there are 10 indicators that do not meet the eligibility standards. Therefore, it is necessary to make improvements for those that do not meet the eligibility standards.

CONCLUSION

Based on the standards of Permendiknas number 40 of 2008, this research revealed that the wood working construction workshop has met the standards but some of them have not been met and must be owned. Those included in the standard are the workshop room area, hand wood working area, wood working machine area, storage and technician area, wood workshop lighting level in the morning and afternoon, air humidity in the morning and afternoon, air velocity in the afternoon, air circulation in the natural ventilation of the workshop, sound and noise, room temperature in the morning, number of students, workshop practice implementation, workshop room color, wood workshop practice equipment, 8 types of working station tools, workshop facilities, educational media, first aid kits, and information data boards. As for the data that does not meet the standard, the lighting level of the wood workshop in the afternoon, natural ventilation air circulation of the workshop in the afternoon and evening, air humidity in the afternoon, room temperature in the afternoon and evening, number of technicians, 4 types of working station tools, fire protection tools, personal protective equipment, trash and vacuum.

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