

## **Workshop Safety Practices Improves Student's Confidence in Practical Work - A Case of Electrical Program Students at Padang Terap Community College**

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**Abstract:** *The safety practice in the working environment and the proper use of equipment is the important aspects, especially involving high-risk work in the construction and industrial sectors. This conceptual paper highlight some of the contributing factors due to an unaware attitude towards the safety aspects of practical work and lack of knowledge of the safety practices in the lab. This paper proposes to identify the relationship between student knowledge and confidence in the lab work and to identify the relationship between student attitude and confidence in the lab work. The findings of this study can reinforce the Safety and Health theory adopted by industry practitioners through the body of knowledge and help students to obtain accurate and safe work practices, especially for engineering students at the certificate level, diploma or higher.*

**Keywords** - Workshop Safety Practices, Compliance, Practical Work, Electrical Education

### **I. Introduction**

The safety issue and the use of equipment in workshop is an important aspect, especially involving high-risk work in the construction and industrial sectors. Failure to practice safety at workplace often raises the risk of accidents that can cause disability, injury to the body and even death. Neglecting to the risk is not only affects to the individual, but also involve loss to the institution and also to the country. Besides, good safety practices should be applied not only in the industrial sector but also need to be more emphasized to students who are entering the world of work especially in engineering that involve skills.

In education, institutions of higher learning which offer engineering courses that utilize labs or workshops in their teaching and learning method should take the initiative in cultivating good safety practices in their lab. Moreover, this needs to be implemented without tolerance in all higher public education institutions and also to the private sector, which also without exception to all Community College including Padang Terap.

In general practice at Padang Terap Community College, students who are directly involved in carrying out practical work are strongly stressed by the lecturers to practice work safety during at the lab. Certainly, by emphasis on the work safety that instilled in every student as a work culture can prevent students from accidents in their practical demonstration and application.

### **II. Safety**

Safety refers to a certain condition protected or avoided by danger, tragedy or disturbance that may cause an accident. According to the [1], safety is a matter or step that must be taken to prevent unwanted situation such as injury or loss of life. [2] Defines safety as a safe and risk-free environment, including injury and risk either knowledge or skills in the prevention of accidents or illnesses or hazardous conditions. Therefore, the safety regulations shall be segregated to consumers to avoid and minimize the accidents [3].

According to several definitions, the meaning of safety that in line with the Occupational Safety and Health Act 1994 is required workers to implement a safe work in the workplace. As generally known, safety work culture should be a put as a priority in every work done in industry, public and private institutions including home [4]. In reflecting to that, each of the workers should also be aware of the correct procedure using the equipment and the risks that may arise in the accidental situation [3]. Indeed, the correct procedure for using the equipment may be learned through observation, manual reading and in the classroom as a knowledge to them in applying safety in their workplace. In fact, through observation and explanation the workers know how to use the right tools and with a safe standard operation procedure [5] for example, new electrical worker will follow based on the experienced workers practice and being instructed to wear safety shoes, nose covers, safety

glasses and safety hats when doing wiring work. The instruction given need to be clear that the purpose of safety practice is to protect them from accidents such as objects or dust hurting the eyes, dust enters the nose, which can disrupt breathing and protect the head from falling objects from high places. In addition, sharing accident videos with the new workers can also help to raise awareness of the risks of electric shock, injury and equipment damage if they ignore the security aspects.

### **III. Safety In Practical Class**

Safety in handling electrical appliances is an important aspect when doing a job, especially involving electrical appliances that can lead to accidents that can cause loss of life. Due to that, knowledge on safety needs to be taught in the early stage so that safety practices become a common practice at work. [6] states that in producing workers with healthy and safe work practices, proper education must be provided to students so that the knowledge learned will be absorbed and practiced at all times in the future. This informal and with the formal education of electrical safety and regulation enhances the knowledge and confidence of students to practice at work.

#### **Attitude**

[7] States that attitude is the degree to which a person likes or dislikes something. Attitude represents a willingness to do something and also reflects to a person's belief in something. According to [8] attitude is the tendency to act positively or negatively toward a particular object, situation, institution, concept or person. In the same statement, [9] noted that attitude has a specific effect on behavior, effort, interest and awareness.

In education, [9] in his study argues that attitudes students' who ignore safety during training will easily get an accident if they not given their attention on risk or cause of accidents. This was previously mentioned by [10] that the factor leading to accidents is caused by the attitude of the worker or the student himself in regards to safety.

#### **Knowledge**

[11] Defines knowledge as a stage in the form of truths, principles and information. It comes from the past and new experiences, either personally or through other sources and used to achieve certain goals.

Usually accidents happen when the workers do not have enough knowledge on many aspects such as the technical aspect, machinery, production, personal safety attire and many more that reflects to the expectation of what will happen and how to overcome if the accident happens in the first place [12]. [13] noted that adaptation and knowledge of laboratory work are essential to avoid the risk of accidents. This has been agreed that knowledge and proper use of equipment will prevent accidents and must be learned by all individuals. Therefore, in this study, the knowledge is interpreted as an existing information within the student on the safety practice in the workshop that can persuade them to predict what will happen.

#### **Confidence**

Most successful in life start with believing in its own ability which is known as confidence. Confidence occurs from internal person that present from belief in order to achieve something [14]. Meanwhile, self-confidence is defined as a belief that a person can achieve a desired goal and will endeavor through his actions to accomplish [12]. In simple meaning, a person knows that he has a potential that can lead him to success. In this case, the confidence of students to perform practical work using electrical appliances in a safe manner will retain them from the dangers of electric shocks which are often be afraid of in performing electric circuit function tests [15].

Confidence in conducting electric circuit tests is very important to prove that the work performed reflects the competent of understanding and skill of safety, which is set in line with the scores given by the lecturers. Based on observations, students who wear safety shoes and practice safety aspects are more confident in their electric circuit testing rather than those who do not practice safety [16]. In fact, safety practices carried out by the lecturers at the lab is also reflected as the best practice to improve students' confidence in the safety work culture, for instance wearing a safety shoe in workshops as a safety routine among lecturers which may also provide effective examples to enhance students' confidence in practicing safety.

### **IV. Padang Terap Community College**

Padang Terap Community College (KKPT) was established on April 11, 2011 which under the Ministry of Education Malaysia. This college offered 2 full time course; 1) Certificate of Electrical Wiring and; 2) Certificate of Computer Network. The College is located at Belimbing Indah Park, 06300 Kuala Nerang, Kedah Darul Aman that accompanied with 29 staffs. Beside full time course, this college also offers a short course for the community as for them to enhance their life long education.

The Certificate of Electrical Wiring is one of the popular course taken by the students. The purpose of the study is to produce workers in a technician level for the industries or as an entrepreneur. Educational challenges to the lecturer are to provide students who are not only competent in terms of their work but also practiced high safety during work.

### **V. Discussion**

Safety in the workshop that became a practice or work culture among the industry players must be applied in Technical and Vocational education. This approach should be consistent and in line with the application in the industry as an enactment of the Occupational Safety and Health Act 1994 (ACT514). The ability to practice safety in a workshop will ensure safety in the workplace.

However, safe work practices that should be a priority in working ground are seen to be less effective from the aspect of application which resulting accidents at workshops during the practical classroom. Unfortunately, awareness among mentality of the students as well as less supervision of the lecturers can be the cause of the accident.

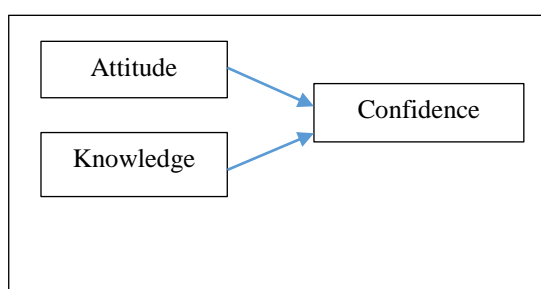
Based on observations made during the process of teaching and learning in the practical workshop class, it was found that students take for granted on the safety aspects. Despite the warning and supervision given by the instructor, there were still negligence and accidents happen in the workshop. This is attributed to the attitude of taking it easy on the aspects of safety in doing practical work. Hence, the attitude should be considered as an antecedent to the accident in the workshop during practical work.

Apart from that, other factors that assume to be contributing to the accident in the workshop were also from the lack of knowledge on safety. Proper knowledge of safety practices can help students gain the confidence to do better in their work. Therefore, the knowledge factor must be taken into consideration as an important factor in this study.

Based on the assumption above, there are several questions to be answered in solving a number of issues that can be addressed at the Padang Terap Community College in the aspects of safety management workshop; i) Does the influence of student attitude affect students' confidence to do practical work?; ii) Does adequate knowledge affect students' confidence to do practical work? Based on the questions raised above, this study should be conducted to assist the Padang Terap Community College's academic and management in improving the Student's safety practices of workshops and laboratories.

Based on the questions derived, the framework is tabulated.

Framework



### **Hypothesis**

- 1) There is a significant relationship between attitude and student's confidence in doing practical work.
- 2) There is a significant relationship between knowledge and student's confidence in doing practical work.

### **Research Objective**

1. To identify the relationship between attitude and student's confidence in doing practical work at Padang Terap Community College.
2. To identify the relationship between knowledge factor and student's confidence in doing practical work at Padang Terap Community College.

## **Research Questions**

1. Is there a relationship between attitude and student's confidence in doing practical work at Padang Terap Community?
2. Is there a relationship between the knowledge and the student's confidence in doing practical work at Padang Terap Community College?

## **Study Interest**

The findings of this study can assist the management to identify the contributing factors to gain student's confidence in their practical work at the Padang Terap Community College. Furthermore, these findings also can reinforce the Safety and Health theory adopted by industry practitioners through knowledge-enhancing exercises and help students to obtain accurate and safe work practices, especially for technical and vocational students at the certificate level, diploma or degree.

In addition, the findings of this study also contribute to the reduction of statistics of accidents and equipment damage at the institution level which can reduce department maintenance costs. The study will strengthen the theory that attitude and knowledge has a strong influence on an organization and contributes to the body of knowledge.

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