

# Industrial Student Apprenticeship: Understanding Health and Safety

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**Abstract.** The level of accident in industry is very high caused by lack of knowledge and awareness of workers toward the health and safety. Health and Safety are efforts to create a comfortable and productive atmosphere to accomplish a purpose or goal as maximum risk in the workplace. Vocational Education students must conduct training on business and industry, prior to that they should have a clear understanding on occupational health and safety. The purpose of this research is to analyze the understanding, preparation, and implementation of work health and safety of the students. Method used is descriptive method and data are collected using instrument, observation and interview. The result of study is conclusion of understanding occupational health and safety of vocational education students.

## 1. Introduction

Vocational education is education that prepares learners to work in DUDI (Dunia Usaha & Dunia Industri) or education training that provides practical experience in a particular occupational field, as algiculture, home economics, or industry [1]. Four purposes that are most central to its project are educational provisions focused on a) the preparation for working life including informing individuals about their selection of an occupation; b) the initial preparation of individuals for working life, including developing the capacities to practice their selected occupations; c) the ongoing development of individuals throughout their working life as the requirements for performance of work transform over time; and d) provisions of educational experiences supporting transitions from one occupation to another as individuals either elect or are forced to change occupations across their working lives [2].

Vocational education especially electrical engineering should understand health and safety. Electricity is a familiar and necessary part of everyday life, but electricity can kill or severely injure people and cause damage to property. Electrical injuries can be caused by a wide range of voltages but the risk of injury is generally greater with higher voltages and is dependent upon individual circumstances. Torch batteries can ignite flammable substances. Electrical injuries: electric shock, electrical burns, loss of muscle control and thermal burn [3]. Students who do practical work must understand the importance of health and safety

The level of accident in industry is very high caused by lack of knowledge and awareness of workers toward the health and safety [4]. In the workplace unseparated from risk of work. Accident is event that happens unexpectedly, especially causing injury or damage. The number of accidents at work in Indonesia is still high. Citing data of Badan Penyelenggara Jaminan Sosial (BPJS) Employment, until the end of 2015 there have been work accidents as many as 105,182 cases. While,



for the case of serious accidents that resulted in deaths were recorded as many as 2,375 cases of the total number of work accidents. The main cause of ill health and accidents at work is the low awareness of the importance of Health and safety application in industry and society. Implementation of Health and safety is often regarded as cost, not as an investment to prevent accidents [5].

Vocational Education students must conduct training on business and industry, prior to that they should have a clear understanding on occupational health and safety [6]. In the improvement of students' skills, students undertake internship (training) for three months with the aim to improve the ability and recognition of industry. Vocational schools are becoming more aware of the safety and health challenge [7]. The first should we know is how to managed health and safety effectively is: a) know about the risks in work, b) control the risks that need it, c) make sure the risks stay controlled [3], but still many students ignore the existence of the importance of health and safety in the industrial world. This makes researchers want to analyze what causes students to ignore the importance of health and safety. This study analyzes from understanding, preparation and application of occupational health and safety in doing technical internship. There can be a number of ways to control the risks you identify as a priority for action. Make sure the risks stay controlled. Based on the problem, then conducted how to fine out understanding student knowledge about health and safety?

## 2. Methods

This study was conducted to find out the understanding of young workers. Using a descriptive survey model, this study takes the population of children who will undertake technical internships, method and data collected using instrument, observation and interview. This research was conducted for vocational education students. The questionnaire contains questions of knowledge related to occupational health and safety, how they apply health and safety during their practice in the industry, how to manage health and safety and how to control the risks.

## 3. Results and Discussion

The result of study is conclusion of understanding occupational health and safety of electrical engineering students. Based on reliable sources it is found that the cause of occupational accidents is a lack of awareness of the importance of occupational health and safety. Everyone in the workplace, from the employer to the newest worker, has different but important duties to keep the workplace safe. Based on International Labour Organization Jakarta (ILO) data 40 % of young workers are more at risk of accidents than adult workers. Workplace differences have different work risks [8]. So the handler must be appropriate.

Research instrument the important thing that must be understood by the electronic learners in the application of occupational health and safety:

- Recognize the hazard: Students must recognize the dangers of the workplace.
- Asses the hazard: Students understand the risks that will cause injury
- Control the hazard: Students can control the hazard by looking for ways to get rid.
- Evaluate: Evaluate how well the hazard controls are working.

## 4. Conclusions

Accidents occur due to lack of understanding so that the level of awareness of health and safety becomes low. Environmental cultures that do not require learners to apply health and safety in accordance with the procedure make the lack of awareness of the application of health and safety. Four steps to inculcate the importance of occupational health and safety: Recognize, Asses, Control and Evaluate.

## References

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