



Attitude Aspect in Safety Practices in Workshop among Student in Industrial Training Institute

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ABSTRACT

The purpose of this study is to examine the safety practices in the workshop among students at the Industrial Training Institute in terms of attitude aspect. A good attitude in safety while in the workshop parallel to the rules will make the working atmosphere in the workshop safe and free from the risk of accidents. The actual study was conducted and the information was obtained by distributing questionnaires to respondents consisting of 176 students from two industrial training institutes. The data were analyzed using IBM Statistical Package for Social Sciences (SPSS) Software. Analysis made is translated into mean, frequency and percentage. Findings show that the student attitudes are very high in safety practices in workshops at the Industrial Training Institute.

Keywords:

Attitude, workshop, industrial training
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1. Introduction

Skills and vocational education is the link between education received during learning and real conditions in employment. Among the ways proposed to meet the growing demand for relevant education is to devise a Technical and Vocational Education Training (TVET) strategy for youth to access the workplace [1]. Thus, it is suggested to increase the collaboration of tertiary institutions with industry in order to deliver job-ready graduates, with a focus on vocational education and training as mentioned by [2]. The practical work given to the students is tailored to the competencies required in the workforce, so when they are doing the practical work the risks of meeting with an accident will occur. Attitudes play an important role in avoiding harm in doing practical work in the workshop. Students who have a good attitude will always comply with safety regulations at work or workshops. Safety aspects should always be kept in mind especially before starting practical work in the workshop. As mentioned by Kassa [3], positive attitude is required in order to have strong knowledge and practice in occupational safety and health. Therefore for good safety practices in the appropriate field of work, more attention on attitude is needed to ensure absolute control [4]. Students' awareness of safety practices should be nurtured from the beginning, so that positive

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practice is always embedded in the student's soul itself. The waiver of the safety aspect will probably be resulting in injury, loss of life and property damage. Instead, the image of the institutions involved will also be bad and concerned of the impact on operation at the workshop is inventible. They need to understand their responsibilities to protect themselves, their work colleagues and the wider community [5]. They need to be aware of the consequences that may arise when the safety rules are not followed and not according to practices to work safely [6].

In doing practical work in the workshop, every instructor or supervisor will emphasize the safety aspect of the workshop. Normally, before practical work is carried out, instructors will provide information on practical safety practices and work steps. Students will be reminded from time to time so they can form a safe work culture for themselves, others, tools and machines and their surroundings. Although some efforts have been made, however, workshop accidents still occur especially when conducting practical work at workshops. Accidents that occur usually result in injuries, limb disabilities and loss of life. This will make the image of industrial training institute does not guarantee the safety of students. A safe working environment is an employer's responsibility by providing practical measures to manage hazards [7]. Based on this phenomenon, to ensure that industrial training institute is a secure institution for students to acquire knowledge and skills, a study conducted to find out the extent of attitude of workshop safety practices practiced by the student when doing practical work at the workshop. The focus of this study is on the attitude towards safety practices at the workshop of the students when doing practical work at the workshop.

2. Methodology

The method used in this study is quantitative approach using questionnaire. Researchers choose this method because respondents will not be afraid to respond because respondents' details are not required and their answers are kept confidential. This method requires verification, validation and recording before analysis can be done by using the Statistical Package for Social Science (SPSS), [8]. The scale for the questionnaires is designed in the form of 5-point Likert scales. The items are scored as 1 "Strongly Agree", 2 "Agree", 3 "Neutral", 4 "Disagree" and 5 "Strongly disagree". The Cronbach-alpha reliability for the questionnaire is 0.849. This set of questionnaires is divided into two parts, Part A contains three items that include questions related to the background of the respondents ie gender, level and semester of study. This information is important for researchers to make connections with the questions to be reviewed according to specific needs. Part B consists of 20 questions related to the attitude aspect of the students. The questionnaire was distributed to 176 respondents in two selected Industrial Training Institute. The questionnaire is being analysed using the SPSS Software version 21.0.

3. Results and Discussion

3.1 Descriptive Analysis in Student Background

The total questionnaires were collected from 176 respondents and that data are presented in Table 1 which show background and demographic information of the respondents.

Table 1 shows that the male student has the highest percentage in total number of respondent, which is 64.8%, followed by female student with 35.2%. Most of the respondent comes from Malaysian Skills Certificate with 50.6% (89) and followed by 31.3% (55) of the respondent comes from Malaysian Skills Diploma. Meanwhile, 18.2% (32) is from other qualification. In term of semester, 35.2% (62) of the respondent is from semester 4, 26.7% (47) from semester 3 and 18.2% (32) is from

semester 1. The rest of the respondent is from semester 5 with 6.3% (11), semester 8 with 7.4% (13), semester 2 with 4.5% (8) and semester 6 with 1.7% (3).

Table 1
Background of Respondents

Item	Frequency	Percentage (%)
Gender		
Male	114	64.8
Female	62	35.2
Level		
Malaysian Skills Certificate	89	50.6
Malaysian Skills Diploma	55	31.3
Others	32	18.2
Semester		
1	32	18.2
2	8	4.5
3	47	26.7
4	62	35.2
5	11	6.3
6	3	1.7
8	13	7.4

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i. Students' attitude of safety practices while at the workshop

Table 2 shows the overall mean attitude scores. The scores fell in the range of 3.43 - 4.19 and the average standard deviation is 0.446 and the average mean level is 3.86. This shows that the level of students attitude of safety practices were high.

Attitudes affect an action and it is a factor that is often associated with accidents occurring in workshop. The student is practicing the right attitude and in line with the OSHA 1994 Requirement, under Section 24 – 27 whereby the student is an employee who falls under the act mentioned while Industrial Training Institute is the employer which falls under the First Schedule, OSHA 1994 Act. The result also shows that students who have a positive attitude tend to accept and behave positively in safety practices. This result is supported with [3] studies in which he mentioned that positive attitude is required in order to have strong knowledge and practice in occupational safety and health. It also supported with [4] research that for good safety practices in the appropriate field of work, more attention on attitude is needed to ensure absolute control.

We know that knowledge, attitude and practice (KAP) are interrelated factors and together they form the dynamic life system itself [9]. However, sometimes even though the students have knowledge about safety but they don't have the right attitude therefore expansion on attitude and practices towards safety are much needed [10]. Through the implementation on training on safety at workshop or laboratory, it helps in improving and shape student attitude to practice good safety while doing their job [11]. Therefore theoretically, since every graduate from TVET will enter the

workforce, paying attention to safety at work, have positive attitude in practicing and practice it is the basic skill that each student must possessed [12].

Table 2
Attitude on safety practices level

No.	Item	Mean	Standard Deviation
Q1	I did not enter the workshop if there were no supervisors in the workshop.	3.51	.926
Q2	I adhere to safety rules when using hand tools eg chisel.	3.94	.694
Q3	I wear practical clothing while doing practical work in the workshop.	4.06	.699
Q4	I do practical work in a place that has been assigned.	4.10	.602
Q5	I make sure that no obstacles are placed at the entrance of the workshop.	4.11	.708
Q6	I did not play or joke with my friends while I was using hand tools.	3.99	.676
Q7	I always put the equipment I used to the original place	3.95	.743
Q8	I clean the workshop every time after practical work.	4.10	.693
Q9	I use the appropriate brush to clean the table surface.	3.92	.705
Q10	I use gloves when using a machine or electrical appliance in the workshop.	3.75	.818
Q11	I wear sandals when in the workshop.	3.77	1.347
Q12	I wear safety boots in the workshop.	4.19	.784
Q13	I wear an ear protection device while operating a loud sound engine.	3.6	1.037
Q14	I wear safety glasses or face shield when working with hazardous materials and / or equipment.	4.03	.792
Q15	I did not shut down the engine every time after use.	3.43	1.388
Q16	I use a brush to remove iron dust or dirt on the tools and machines.	3.97	.721
Q17	I use welding paper to remove the rust effect on the tool	3.78	.913
Q18	I swept oil on the tool to avoid rusting equipment.	3.90	.793
Q19	I labelled the damaged tool with a red mark and report to the workshop supervisor.	3.81	.810
Q20	I did not make any adjustments or measurements while the machine is operating.	3.38	1.175
		Total	3.86
			.446

ii. Significant differences between male and female student's attitude on safety practices while at the workshop

The test shows that there is no significant difference of the attitude aspect between male and female students towards safety practices in the workshop at the industrial training. The value of $t = -0.909$, $P = .365$ is insignificant because it exceeds 0.05. The results showed that there are no difference in the mean score of the attitude aspect in the workshop safety practices between male students (Mean = 3.8404, SD = 0.40592) and female students (Mean = 3.9089, SD = 0.51219). The result is not in line with observation and study by [13], where they found that female students have higher safety practice scores than male student and study by [11] in which they indicates that women

are more likely to practice safe practices than men. A positive attitude does not specifically design only to certain gender but it must be practiced by everyone.

Table 3

T-test analysis for attitude aspect on safety practices in terms of gender

	Male (n=114)		Female (n=624)		t	Sig.P
	Mean	Std. Deviation	Mean	Std. Deviation		
Attitude	3.8404	.40592	3.9089	.51219	-.909	.365

*Significant at p < 0.05

4. Conclusion

As a conclusion, it is found that attitude in safety practices among students in workshop is at high level. All items on safety aspects show a high level. Safe work culture is very crucial. However, there are still items that are at a moderate level. Although the percentage is small, its presence can cause accidents which indirectly harm students, governments, administrators and so on. In the long term those student who already graduated from ITI, will be filling up the workforce and they must carried the fundamental, knowledge and the right and positive attitude that they have learn in ITI and implement it at their workplace.

References

- [1] Adamu, Idris. "The Role of Teacher Training Institutions in Technical and Vocational Education and Training (TVET) in Nigeria." *Journal of Advanced Research in Social and Behavioural Sciences* 1 (2016): 46-51.
- [2] Koen, Vincent, Hidekatsu Asada, Stewart Nixon, MR Habeeb Rahuman, and AZ Mohd Arif. "Malaysia's economic success story and challenges." *OECD Economic Department Working Papers* 1369 (2017): 0_1.
- [3] Kassa, W. "Assessment of Knowledge, Attitude and Practice Towards Occupational Health and Safety Among Medical Laboratory Personnel in Selected Governmental Teaching Hospitals of Ethiopia." *Addis Ababa, Ethiopia: AAU* (2015).
- [4] Patrick, Azodo Adinife, and Adejuyigbe Samuel Babatope. "Nigerian Engineering Students' Compliance with Workshop Safety Measures." (2013).
- [5] Meyer, Thierry. "Towards the implementation of a safety education program in a teaching and research institution." *Education for Chemical Engineers* 18 (2017): 2-10.
- [6] Shallcross, David C. "Safety education through case study presentations." *Education for chemical engineers* 8, no. 1 (2013): e12-e30.
- [7] A. Rahim, A. Hamid, and K. C. Wong, 'Implementing occupational safety and health requirements in construction project Akademia Baru construction project', *Journal of Advanced Research in Applied Sciences and Engineering Technology*, vol. 6, no. January, pp. 53-63, 2016.
- [8] N. A. Z. Ahmad Tarmizi Abdul Rahman, Romzi Ationg, 'A paradigm shift in understanding mixed method research : A Malaysian perspective', *Journal of Advance Research and Social Behavioural Sciences*, vol. 9, no. 1, pp. 46-56, 2017.
- [9] Lakhan, Ram, and Manoj Sharma. "A study of knowledge, attitudes and practices (KAP) survey of families toward their children with intellectual disability in Barwani, India." *Actionaid Disabil News* 21, no. 2 (2010): 101.
- [10] Ijaz, Nadia, and Samina Malik. "Chemical Safety: knowledge, attitude and practices of science teachers." In *Conference proceedings. New perspectives in science education*, p. 431. libreriauniversitaria. it Edizioni, 2014.
- [11] Walters, Ayana UC, Wendy Lawrence, and Nigel K. Jalsa. "Chemical laboratory safety awareness, attitudes and practices of tertiary students." *Safety science* 96 (2017): 161-171.
- [12] Chen, Su-Chang. "The current status of general health education curriculum in technical institutes and universities in Taiwan." *Creative Education* 1, no. 1 (2010): 62-67.

- [13] Vaz, K., D. McGrowder, R. Alexander-Lindo, L. Gordon, P. Brown, and R. Irving. "Knowledge, awareness and compliance with universal precautions among health care workers at the University Hospital of the West Indies, Jamaica." *The international journal of occupational and environmental medicine* 1, no. 4 October (2010).
- [14] Department of Occupational Safety and Health, *Guidelines on Occupational Safety and Health Act 1994 (ACT 514)*, vol. 1994, no. Act 514. 2006.