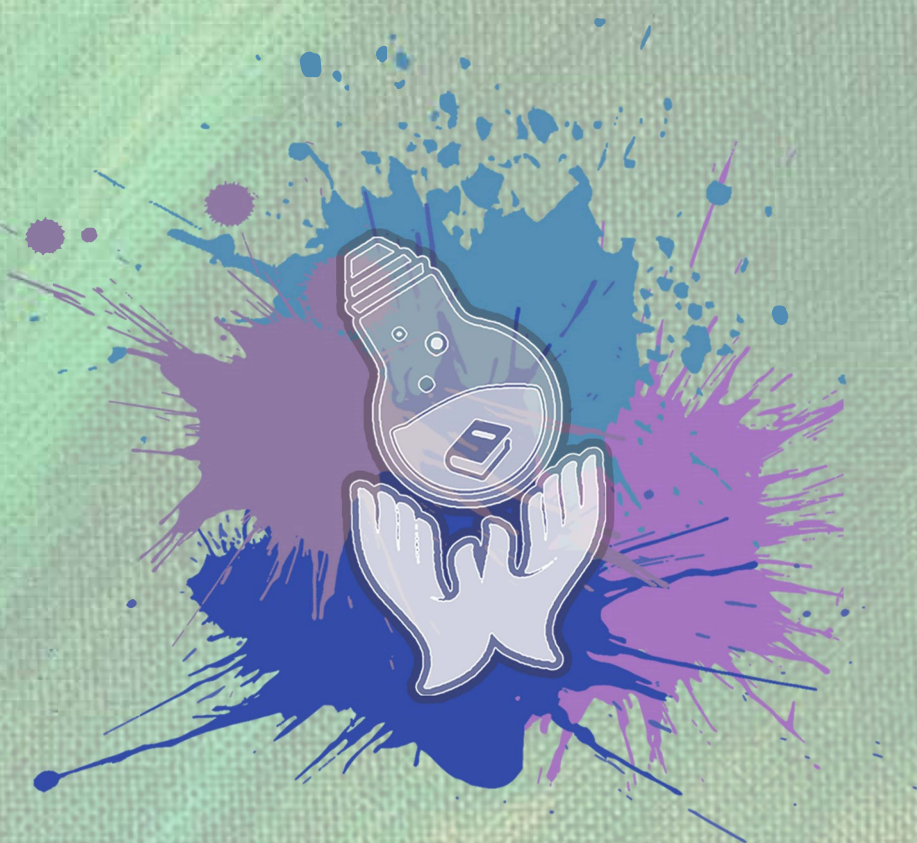




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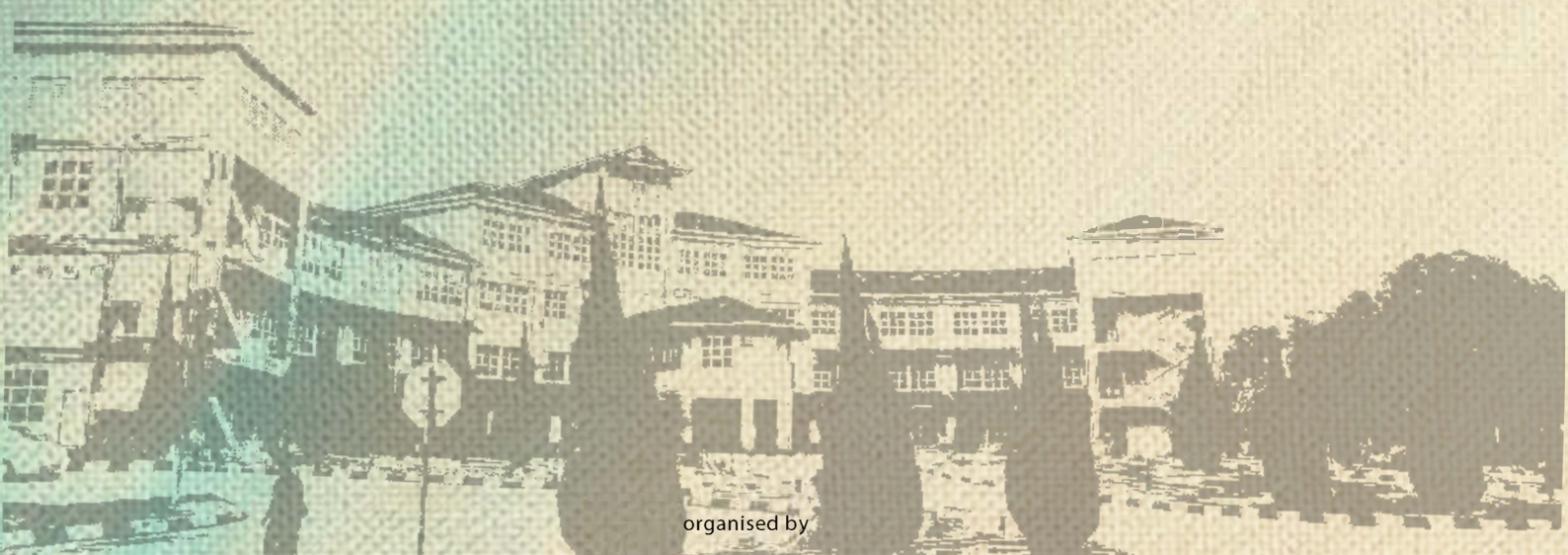


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MEASURING THE SAFETY CULTURE AMONG THE MAINTENANCE WORKERS IN RAILWAY STATION

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Abstract:

Safety culture plays the crucial role in the workplace especially technical working. Some of the workers are not adhere to the rules and the guidelines which make the high chances towards the possibility accidents can occurred. This paper discussed on the problems of inability of maintenance workers to conduct their works in safe behaviour and ignored the importance of safety culture railway station. Rail transportation have been improved due to the technology advanced, thus safety culture need to be taken serious. The purpose of this study are 1) to identify the indicators of safety culture among the maintenance workers in railway station and 2) to measure the safety culture among maintenance workers in railway station. In order to achieve the objectives, the quantitative method has been done and the questionnaires were distributed to gather all the information to the maintenance workers in maintenance department of the railway station. The questionnaires covered all the indicators of safety culture that being identified based on the previous research. The result shows the individual behaviour indicator has the highest level of safety culture in the KTMB Kuala Lumpur Central.

Keywords:

Safety Culture; Rail Transportation; Indicator of Safety Culture

1.0 INTRODUCTION

Modern technology has being improved from time to time which we can see it in our own country. There are many facilities that have been built by government for benefits and comfort of communities such as public transports. In Malaysia, the first railway line was constructed between Taiping and Port Weld during the Malaya era in 1885. In 1886, it expanded to Kuala Lumpur and Klang and later a new line was constructed between Seremban and Port Dickson (1891). Malaysia achieved its independence, the railway lines were continuously lengthened. In 1995, the first commuter train service was introduced by KTMB to connect Kuala Lumpur and Rawang and Kuala Lumpur Seremban (Nordin, Masirin, Ghazali, & Azis, 2015). And today, we have Electric Train Service (ETS) where it have high speed rail and can bring more occupants. Therefore, maintenance management is one of the crucial department or team to ensure the asset function well and the business success. Maintenance management responsible in order to keep, restore or improve the facilities to a currently accepted standard and to sustain the utility and value of the facility. However, many fatal or accidents still occurred and this what makes people worry to take public transport. Accidents occur due to many factors and occupational hazards and accidents have always been regarded as critical problems encountered by workers in workplaces. Thus, it can be associated with the level of safety culture maturity among the workers.

1.1 Problem Statement

Refer to the annual report of KTMB 2018, the number of injured cases increase from 1 case in year 2016 to 4 cases in year 2017. Some of accidents or incidents occurred were cause by the workers itself inability to conduct their maintenance work in safe behaviour. Also some of them ignored the importance of safety culture where it is most crucial in order to keep the rail station safe. Thus, the organisation are significant to execute the safety culture in themselves. Every maintenance worker is compulsory to ensure that all the works done are in safe behaviour. These are crucial that all the possible accidents or incidents could be avoided. Everyone have to understand well and practice the safety culture in the workplace to make sure all the trains, facilities, tracks, electricity were being maintained according scheduled fixed.

1.2 *Research Objective*

The research objectives of the study are:

- i. To identify the indicators of safety culture among to maintenance workers in railway station.
- ii. To measure the safety culture among the maintenance workers in railway station.

2.0 **LITERATURE REVIEW**

According to Oedewald, Gotcheva, Viitanen, and Wahlström (2015), the safety culture is defined as attitude, perception, efficiency and the pattern of individual behavior, and a group who responsible to determine the management of the safety and health in an organisation.

2.1 *The Indicators of the Safety Culture*

All the indicators of the safety culture play essential role in improving the level of safety of the service provided and the ways that the company be managed. These indicators were identified based on the previous research.

1. **Organisation Behaviour** - One of the most difficult aspect in creating positive safety culture is to win people's heart and their mind. It is because the hearts and minds are cannot be directly control by the organisation. Even though it cannot be directly control, organisation can persuaded them to believe and bare in their mind that safety is important to organization (Cooper, 2001).
2. **Communication** - Communication between the top management and employees is very important to prevent from miscommunication which can lead to accidents or serious hazard. The feedback also required to avoid the misinterpretation by the employee in making decision (Hudson, 1999).
3. **Individual Behaviour** - One of the factor for these accidents occurred are because of the unsafe behaviour of individual. They being careless, willfulness and neglect the rules and guidelines provided. Based on a study about the worker behaviour, the result identified two main reasons for unsafe work behaviour: 1) lack of awareness about safety and 2) poor attitude towards safety (Teo, Ling, & Ong, 2005).
4. **Training** - According to Teo et al. (2005) the number of accidents may be reduced if workers' awareness about safety increased through training. Skill in practicing the work is essential to gain greater quality work and reducing the cost in maintenance.
5. **Competencies** - Competence refers to the combination of skills, abilities and knowledge that enable a person to undertake the tasks involved in a job. Competencies refer more specifically to the way of a person to perform their job. So, the behaviour that they demonstrated enable for them to perform the work effectively.
6. **Awareness** - Risk awareness is developed in organisations through programs that encourage workers to undertake a risk assessment in their minds before commencing work. Refer to Borys (2009) safety culture is an interpretive device to explore how successful an organisations leader initiated risk-awareness program in creating cultures of risk-awareness and workers who are more risk-aware.

3.0 **METHODOLOGY**

The questionnaire has been distributed to the maintenance workers in Maintenance Department of KTMB Kuala Lumpur Central. A total of 60 sets of questinnaire has been distributed to the respondents and all the questionnaires were answered by the repondents, giving a 100% response rate. This study also using the primary and secondary of data collection techniques in order to gain the accurate and price information. The questionnaires data were analysed by the descriptive analysis and Average Index Analysis.

4.0 ANALYSIS AND FINDINGS

All the information and indicators were analyzed by using SPSS software version 20. The data is analyzed to ensure that it achieved the objectives of this study. Most of the respondents are maintenance workers in the range of age 41 with above 25 years working experience.

4.1 To Identify the Indicators of Safety Culture

Based on the past research regarding the implication of safety culture, there are six (6) indicators that has been identified by the researcher which are competence, organisational behaviour, individual behaviour, communication, training and awareness.

4.2 To Measure the Level of Safety Culture

Table 1 shows the level of safety culture based on the indicator. The average means show the all of the indicators of safety culture have reached the high level, indicating KTMB has practised and prioritised the safety culture in the workplace.

Table 1: Descriptive statistics on the safety culture indicators

| Indicators | | Average Means | Level |
|------------|--------------------------|---------------|-------|
| 1) | Competence | 4.03 | High |
| 2) | Organisational Behaviour | 4.08 | High |
| 3) | Individual Behaviour | 4.12 | High |
| 4) | Communication | 3.78 | High |
| 5) | Training | 3.93 | High |
| 6) | Awareness | 3.84 | High |

5.0 CONCLUSION

KTMB KL Central have high level of safety culture for the most of the indicators. The researcher concluded that majority of the workers practiced the safety culture in undertaking their maintenance works. The researcher used the mean score which 1.00 – 2.33 for weak, 2.34 – 3.66 for moderate and 3.67 – 5.00 for high to interpret the safety culture level. This study found that each of the safety culture indicator shows strength level, however the awareness indicator shows the lowest level. Thus, KTMB KL Central need to increase the awareness level among their maintenance workers and within the organisational itself.

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