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BEST PRACTICE OF REPORTING ACCIDENT AND SAFETY CULTURE IN CONSTRUCTION SITE

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Abstract

Safety and health management system implementation is an important part of the construction projects. This is because working in construction will extremely expose the workers to hazards. This paper discusses the best practices of reporting accidents safety culture in accordance with the laws of Malaysia and the causes of failure in reporting the accident. Many accidents that happen in construction sites fail to be reported to the Department of Occupational Safety and Health, Malaysia (DOSH). The research methodology was conducted through project case studies, document reviews, and interviews. Failure in reporting accidents gives a vague picture about the level of safety and health in the construction industry. Although the construction law requires that each construction site to have a safety and health officer (SHO), yet the law does not ensure that each construction accident was reported to the parties in-charge. Accurate and correct safety procedures could influence the number of accident statistics in construction sites and the improvements made in reducing the number of accidents occurred. Commitment from all parties involved in construction progress play a key role in ensuring that the safety and health at construction sites progresses well. Therefore, the causes of failure to report accidents and the factors affecting safety and health on construction sites are discussed in this paper to outline the best practices in accident reporting and provide guidance to meet the requirements of safety practice compliance at project sites in the future.

Keywords: Best practice, Reporting accidents, Safety compliance, Safety culture

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INTRODUCTION

The construction industry generates 6.0% of the country's economic development (Dehdasht et al., 2022; Rumaizah et al., 2023). Despite the tremendous growth of the construction industry, this sector is not spared from dealing with various problems and challenges such as the issues of accident at the workplace, especially at construction sites. According to Wan Faida and Mohd Saidin (2018), workers in construction sites face one in 300 of the risk of death in a workplace. Risk of disability in the industry is also greater than other industries. Subsequently, procedures in reporting accidents and deaths in construction sites is one of the responsibilities that must be adhered to by the employer to ensure that workers' safety and health are guaranteed. According to Moore et al., (2013), accident reports and investigation reports issued shall be reviewed by the safety and health officer and safety site supervisor so that effective action can be taken to prevent similar accidents from occurring at the construction site. This is so that the rapid growth in the construction industry is in line with the development in terms of the safety and health of employees.

PROCEDURES IN REPORTING ACCIDENTS

If an accident was reported, the cause of the accident will be known. This can help in reducing the accident rate in the future. At the same time, the data collected is an important database for the Department of Health and Safety (DOSH) to perform analysis and prepare strategic plan to administer and enforce the law. Therefore, it is important for the data to be recorded by the employer to facilitate the analysis and to ensure the validity of statistical results (DOSH, 2004).

According to DOSH (2004), the process begins with the notification of an occurrence of an accident. This notification will activate the accident investigation process. Conclusions and recommendations will be discussed and evaluated upon the completion of the investigation report issued. Planning for this system should be set before the accident and before starting the investigation. Results from the collection of reading materials, procedures to report accidents at construction sites are summarised as shown in Figure 1.

When accidents occur, emergency responses such as treating victims should be performed. Then, an accident report shall be made to DOSH within seven days by using the appropriate forms. Then, the Occupational Safety and Health Committee (OSHC) and Safety and Health Officer (SHO) will discuss whether further investigation should be performed or not. If necessary, then further investigation will be performed and the accident investigation report will

be written and reported to DOSH for further action (Ismail, 2006; Nur Adila et al., 2017).

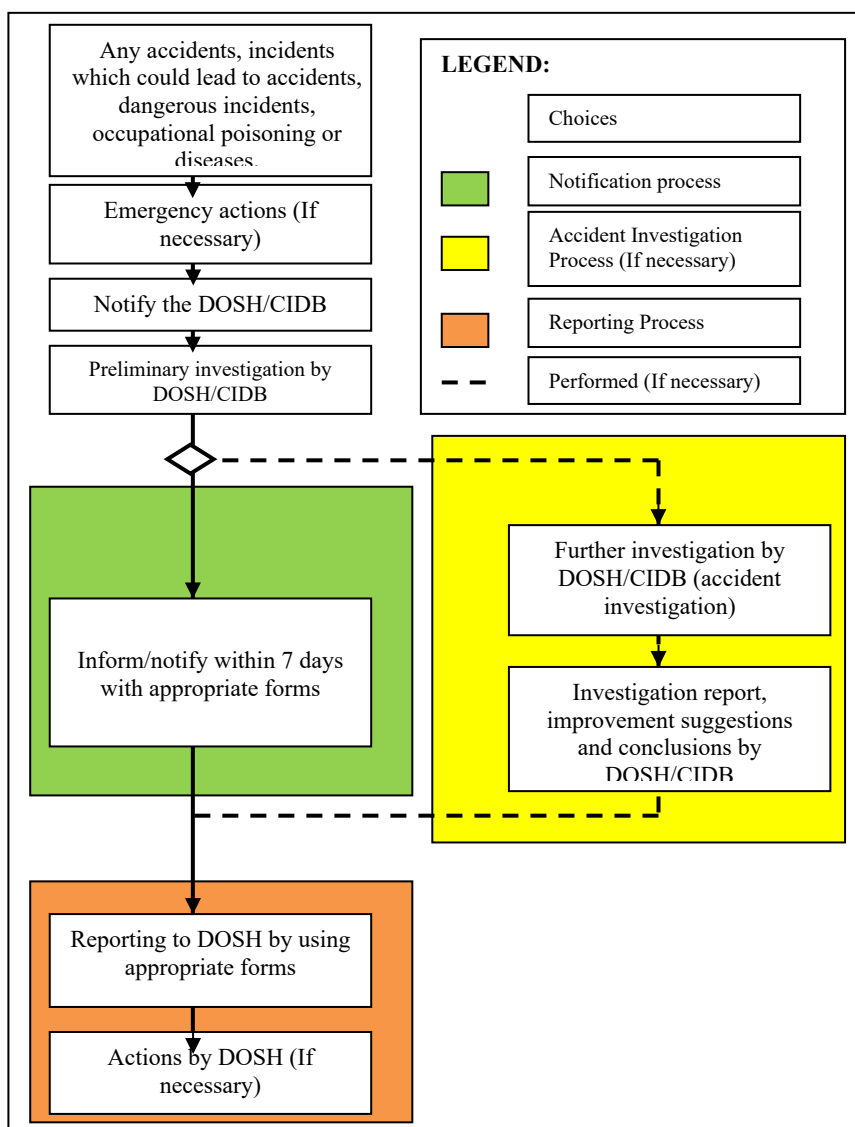


Figure 1: Procedures in reporting an accident at construction site
 Source: DOSH

Emergency Actions

Before starting any investigation or notification of an accident, the first step is to give immediate rescue and medical treatment to the injured worker (Manu et al., 2018). If the injury is serious, then the employee must be sent immediately to the nearest hospital. In addition, other workers who are at the accident site must be appeased so that the situation becomes manageable. For major accidents, the likelihood of psychological trauma to the victim is higher. Therefore, counselling should be given to restore the confidence of the victim (Ismail, 2006).

Notification of Accidents

According to Ismail (2006), and DOSH (2024) oral or written complaint must be made to the authorities and the organisation as soon as the accident occur. The information provided is usually limited to the type of accident and the effect of primaries. It is limited by what is required in the notification form issued by certain authorities or organisations. This notification does not require a full investigation of the accident because it must be done as soon as possible since the cause of the accident is still unknown. Complaints made can involve:

- i. What happened
- ii. Location of accident
- iii. Parties involved in the accident
- iv. Time of the accident

Act 514 requires the employer to make the notification by using the DOSH Form 6 for occupational accidents and incidents involving dangerous death. Serious bodily injuries that prevent the victim from pursuing his normal occupation for five calendar days, and dangerous incidents and accidents that cause him from performing a job for more than four calendar days. While Form JKPP 7 is used for poisoning and occupational disease. If an accident involves death or serious bodily injury resulting in death within one year from the date of the accident, the employer should notify the DOSH as soon as it is known. Failure to make a notification will result in penalties.

Reporting Accidents

The action of reporting an accident is defined as the activity of reporting the complete result of an accident systematically and in detail, stating losses and causes of accidents identified and recommendations for improvement. Since a lot of information is needed, the process of investigation and preparation of the

report require more time as compared with the notification of an accident. This is because the preparation of this report requires more manpower (Ismail, 2016).

According to DOSH (2024) and Ismail (2016), after the emergency action is done, the parties involved in investigating an accident will conduct preliminary investigation of the accident. Further information will be submitted to the authority (DOSH) to make an in-depth and thorough investigation. Further notification will be made to DOSH within seven days after the accident.

Investigation of Accidents

According to De Silva et al. (2018) and Williams et al. (2019a) there are several contributors to the accident or dangerous occurrence that occur in construction sites which seem less obvious to the naked eye. Investigation must be carried out not only in tasks such as recording each event, but also in effective planning. A good planning to ensure an effective investigation can be done to prevent the occurrence of the same accidents from recurring. Planning an investigation should include the following criteria:

- i. Investigate all accidents or dangerous occurrences which may cause injuries
- ii. Procedure to investigate accidents or dangers
- iii. Training - the employer must ensure that the investigating team was appointed to perform the duties to investigate the incident
- iv. Resources such as necessary equipment (cameras, personal protection equipment, etc.) must be provided by the employer.
- v. Accident investigation should be able to answer the questions as follows:
 - a. Compare what should happen with what was happening
 - b. Determining gap between expectations and actual situations
 - c. Determine why the gap exists
 - d. Propose ways to prevent accidents from happening again.

RESEARCH METHODOLOGY

This paper discusses the literature review and case study method has was performed on five construction projects to identify constraints faced by contractors in reporting accidents on construction sites and the factors in ensuring the safety and health practice implementation at construction sites. The result of the literature review obviously revealed that there are three important steps in reporting for an accident at the construction site. Firstly, the staff need to notify the management team on the incident as fast as they can. Secondly, the

management team needs to investigate the cause of the accident. In this stage, they might know how and why the accident happened. Finally, the person who investigates the case needs to report the accident to the authorities so the same accidents could be prevented in the future. Case studies were performed on construction building projects with the presence of occupational safety and health officers (SHO) at all sites.

Compliance in Reporting Accident Procedures

Table 1 shows the comparison between the procedures applied in accordance with the allowed provisions of the project. Results showed that one of the five projects has successfully complied with the procedures provided. Meanwhile, the remaining projects failed to comply with all the regulations. There are some projects which comply with the provisions, but only reported accidents if the case involves death to DOSH. Figure 2 is a guidance for Table 1.

Guidance: -
√ = Performed x = Not performed ∞ = Performed upon situations

Figure 2: Guidance for Table 1

Based on Table 1, Project A is the most critical project because zero accidents were reported to DOSH even though there cases happened at site. It shows that Project A failed to comply with the rules set out in section 32 of Act 514, for all accidents must be reported. This is because the safety and health officer appointed by the contractor would be more favourable to the contractor where the DOSH report was completed only with the permission of the project manager. If the future impact is high, then the accident could be prevented from being reported to DOSH. This clearly shows that the future implication could cause the failure of compliance with the regulations in construction sites.

For Project B, C, and D, the accidents were reported depending on the situation faced and were made only for accidents involving death. According to the respondents, an accident which involves death must be reported to DOSH. Meanwhile, other accidents were not reported because it was reported annually. Respondents in Project B mentioned that only fatal accidents should be reported because it involves many parties and has the greatest impact on the construction project. It is contrary to the guidelines prescribed in the regulations to report the accident, where in rules and regulations of section five and section seven, division two explained that dangerous occurrences, occupational poisoning, and occupational diseases must be reported to DOSH.

Thus, it can be concluded that knowledge about the types of accidents which should be reported to DOSH remained vague. Similar to the respondent of Project A, the respondents of Project C and D also informed that fatal accidents reported to DOSH must obtain the approval of the client or project manager. Thus, it can be concluded that future implication is the main cause of failure of compliance to these regulations.

Table 1 shows that each of the projects carried out investigations for the accidents that happened. However, not all types of accidents were investigated, and coverage of the investigation was done for the internal use of organisations in improving the safety policy in the construction site. Conflict that occurs is often due to the differences in understanding of the types of accidents that should be investigated. Therefore, it can be concluded that there is a lack of knowledge on the basic guidelines and procedures to report and investigate the accidents. Lack of clear guidelines will result in differences in understanding and at the same time, failure in homogeneity of data. It will be an extremely difficult task to analyse and validate the statistical results of accidents in the construction industry in Malaysia.

Table 1: Comparison of the DOSH procedures with the procedure applied by each project

No	Procedures in Reporting Accidents	JKKP	Project				
			A	B	C	D	E
1	Accidents took place	√	√	√	√	√	√
2	Emergency action (if necessary)	√	√	√	√	√	√
3	Inform PKK or DOSH	√	√	√	√	√	√
	Duration of notification (as soon as possible)	√	√	√	√	√	√
4	Preliminary investigation by PKK or DOSH	√	√	√	√	√	√
5	Notify the accident to DOSH	√	x	∞	∞	∞	√
	a) Duration of notification	7 days	7 days	7 days	24 hours	7 days	7 days
	b) Information provided						
	i. What happened	√	x	√	√	√	√
	ii. Location of the accident	√	x	√	√	√	√
	iii. Parties involved	√	x	√	√	√	√
	iv. Time of the accident happened	√	x	√	√	√	√

No	Procedures in Reporting Accidents	JKKP	Project				
			A	B	C	D	E
	c) Types of accident notified						
	i. Death	√	x	√	√	√	√
	ii. Major wound	√	x	x	x	x	√
	iii. Minor cuts	x	x	x	x	x	x
	iv. Incidents that could lead to occurrence of accidents	x	x	x	x	∞	∞
	v. Damage to property	x	x	x	x	x	x
6	Further investigation (if necessary)	√	√	√	√	√	√
	a) Types of investigation						
	i. Death	√	√	√	√	√	√
	ii. Major wound	√	√	x	√	√	√
	iii. Minor cuts	√	√	x	√	x	√
	iv. Incidents that could lead to occurrence of accidents	√	∞	x	√	√	√
	v. Damage to property	√	∞	x	x	x	√
	b) Investigation phases						
	i. Phase 1 : Enclose the accident areas	√	√	√	√	√	√
	ii. Phase 2 : Collection of evidence	√	√	√	√	√	√
	iii. Phase 3 : Analysis of the factors contributing to accidents	√	√	√	√	√	√
	iv. Phase 4 : Investigation report	√	√	√	√	√	√

REASONS OF FAILURE IN REPORTING ACCIDENTS

There are several reasons that cause the failure in reporting the occurrence of an accident. Table 2 shows the causes of failure to report an accident at construction sites. Based on Table 2, the causes in failure to report an accident is due to inconvenience and troublesome, adverse effect on contractor's performance, lack of knowledge, fear of being acknowledged as wrongful, no feedback from DOSH, and shame in reporting.

Table 2: Factors of failure in reporting accidents at construction site

Nos	Factors	Very Low	Low	Intermediate	High	Very High	Total Project respondents	Rank	Mean
		1	2	3	4	5			
1	Inconvenience and troublesome				2	3	5	1	4.60
2	Adverse effect on contractor's performance			2	1	2	5	2	4.00
3	Lack of knowledge		1	3		1	5	3	3.20
4	Fear of being acknowledged as wrongful		4	1			5	4	2.20
5	No feedback from DOSH	2	2	1			5	5	1.80
6	Shame in reporting	4	1				5	6	1.20

Inconvenience and Troublesome

The highest factor for failure to report accidents at construction site is due to the complex procedure of reporting such as a tremendous preparation of paper work, different usage of specific forms, involvement of outsiders at the construction site, appointment of committees to investigate the accident, and other related tasks. It is a difficult task and could hinder the progress of the construction project. Despite the complicated procedures, the worst impact is the effect of closing down the construction site for investigation purposes. The effect of closing the site will eventually cause delays in construction projects. It is accompanied by summons, penalties, or fines imposed by the authorities for the failure in complying with safety compliance. This will result in significant losses for all parties, which include the contractors and the client as well.

Adverse Effect on Contractor's Performance

The second highest factor involves the taintment of the contractor's performance. This occurs when the accidents happen at site recorded by the authorities. It will indirectly affect the performance of the contractors. The performance in this context is defined as the difficulty in getting other construction projects in the

future due to the record of accidents owned by the contractor. It will affect the trustworthiness of others in appointing the contractor for any construction projects in the future.

Lack of Knowledge

This third highest factor involves the lack of knowledge. Lack of knowledge is referred to as the lack of awareness on the vital components of safety and health procedures and requirements to be followed at construction sites. Knowledge, experience and short courses on the safety and health management are needed in regulating the safety and health at construction sites. This is because safety involves the cooperation of all parties, including the workers themselves. Knowledge can also be obtained by undergoing training organised by the Construction Industry Development Board Malaysia (CIDB). Knowledge on the actual duties of each party is essential to avoid the obstacles in implementing their respective duties. It is important for the organisation to ensure that all stakeholders in a project are exposed with everything related to the practice. Thus, knowledge on safety and work experience plays an important role in decision-making in the near future.

BEST PRACTICE AND FACTORS OF ENSURING THE COMPLIANCE OF SAFETY PROVISIONS

One of the necessary aspects in ensuring the compliance with safety provisions at construction sites is to ensure the safety, the cooperation by all parties, and the working experience of safety and health officers. Both board members and their senior managers must understand that their role includes both legal and moral obligations. The board and its directors are responsible for setting the broad strategic direction of the company as mentioned by Noorhayatie & Mohd Saidin (2019a).

They should be focussed on the macro situation, like managers looking at the team's performance from the side-lines. Senior managers are responsible for running the business on a day-to-day basis, and this includes the management of the safety and health brief. Managers need to focus on the micro picture, that is, the players on the field. Boards need to understand that their actions (or inactions) can affect workers' safety and health and that they must do all they can to prevent accidents and ill health. They must be aware that accidents at work can affect employees, members of the public, their families, shareholders, and the wider community in which they operate (Abdul-Rahman et al., 2012; Williams et al., 2019b).

Emergency Actions

There are several safety measures that should be focussed on so that the compliance of safety and healthcare can be applied. Compliance of every action is important so that precautions can be taken before any accident in construction site happens. The safety measures can be divided into several sections as follows:

- i. Safety information on the notice board
- ii. Safety information during “toolbox meeting”
- iii. Safety instructions and warnings on each sign board
- iv. Application of safety plans at construction site
- v. The role of health and safety committees at the construction site
- vi. Coordination of safety activities
- vii. Safety and induction training for all construction workers
- viii. Safety actions such as fines, postponement of works, and not allowed to enter site

Cooperation of Parties Involved

Cooperation from all parties play an important role in ensuring the compliance of safety and health rules at construction sites. All parties should work together in ensuring that the safety and health rules at construction sites are applied by all parties (Buniya et al., 2021) and Mohd Ashraf et al., (2023). The parties who play an important role in safety and health at the construction site are:

- i. Safety and health officer
- ii. Project manager
- iii. Client
- iv. Contractor
- v. Consultant
- vi. Sub-contractors
- vii. Suppliers

Shouldering the responsibilities of safety and health upon the officers only will eventually cause difficulties for them in monitoring the safety activities. It presents an additional workload and pressure to the officers. At the same time, it will interfere with the work specialisation on the small aspects which are not done and thus, causing a major impact at construction sites (CIDB, 2010). Therefore, all the parties involved play an important role in correcting, discussing, and proposing effective safety methods from their own point of views.

It not only helps in progressing towards the completion of the project, but also promotes benefits to each party involved (Malaysia, 1994).

Working Experiences of Safety and Health Officer

Although the safety and health officer is stationed at each site, the safety and health regulations at construction sites are not implemented well. Results showed that a construction site under the supervision of a construction site safety and health officer who has over 10 years' experience is able to comply with the provisions set as compared with other projects with safety and health officer with work experience of less than five years (Noorhayatie & Mohd Saidin, 2019b).

Safety and health officers appointed by the contractor would be in the contractor's side in any decision making whereby in actual work ethic, safety and health officers are supposed to be neutral and their main task is to ensure that the level of safety and health at construction sites was the best. Thus, an experienced safety and health officer plays a significant role in ensuring the compliance with safety at construction sites. This could prevent any external action due to work ethics and bias actions from happening (Williams et al., 2018; Noorhayatie & Mohd Saidin, 2019c).

CONCLUSION

Failure in reporting all types of accidents at construction sites to DOSH has an impact on the accident statistics at construction sites. It will give a vague picture about the actual safety and health level in the industry. Thus, it will eventually hinder the improvement of health and safety in the industry in the near future. Therefore, compliance with safety reporting procedures is required for an accurate statistical result and it can avoid sacrificing more lives in the process of the construction industry's growth. Causes of failure to report the accident should be reviewed and appropriate action should be taken so that this problem will not be repeated. All parties should have safety awareness and cooperate so that safety culture can be nurtured in Malaysia construction industry.

Health and Safety Authority inspectors must check for compliance with these legal requirements and give advice and information on how to comply with the best practices on safety and health management to prevent accidents and ill health. However, these laws set the minimum standards. Many contractor firms now wish to exceed the minimum legal compliance when setting standards for themselves, so they compare themselves to the best companies that are out there. They wish to apply a professional and best-in-business philosophy to occupational safety and health management, as they do for all other aspects of

their business. This is what makes such contractor firms industry leaders and successful at business.

They learn from others in their business class and use the lessons learned to continue to improve and ensure no harm to their employees. All businesses must do this to ensure they continue to be successful and have no accidents at construction sites. This guidance now sets out the general principles that should be used by employers to comply with the best practices in safety and health, with the objectives of having no accidents or ill health among employees.

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REFERENCES

- Abdul-Rahman, H., Wang, C., Wood, L. C., and Low, S. F. (2012). Negative impact induced by foreign workers: Evidence in Malaysian construction sector. *Habitat International*, 36(4), 433–443.
- Buniya, M. K., Othman, I., Sunindijo, R. Y., Kineber, A. F., Mussi, E., and Ahmad, H. (2021). Barriers to safety program implementation in the construction industry. *Ain Shams Engineering Journal*, 12(1), 65–72.
- Construction Industrial Development Board, Malaysia (2010) *Transformasi Industri Pembinaan* CIDB news, Issue 2/2010
- Dehdasht, G., Ferwati, M.S., Abidin, N.Z. and Oyedeji, M.O. (2022), Trends of construction industry in Malaysia and its emerging challenges, *Journal of Financial Management of Property and Construction*, 27(2), 161-178.
- Department of Occupational Safety and Health, Malaysia (DOSH), (2023) *Statistics of occupational accidents by sector in 2023* (Investigated), Putrajaya: DOSH.
- De Silva, N., Rathnayake, U. and Kulasekera, K.M.U.B. (2018), Under-reporting of construction accidents in Sri Lanka, *Journal of Engineering, Design and Technology*, 16(6), 850-868.
- DOSH. (2004). *Notification of Accident, Dangerous Occurrence, Occupational Poisoning and Occupational Disease (NADOPOD)*, Putrajaya: DOSH.
- Ismail Bahari (2006). *Pengurusan keselamatan dan kesihatan pekerjaan*, 2nd Edition. Kuala Lumpur: McGraw-Hill Sdn Bhd
- Manu, P., Mahamadu, A. M., Phung, V. M., Nguyen, T. T., Ath, C., Heng, A. Y. T., & Kit, S. C. (2018). Health and safety management practices of contractors in South East Asia: A multi country study of Cambodia, Vietnam, and Malaysia. *Safety Science*, 107, 188–201.
- Mohd Ashraf Mohd Fateh, Ruslan Affendy Arshad, Siti Maryam Ahmad Marzuki and Mohd Reeza Yusof (2023) Improvements of the Communication Between Consultants and Contractors During the Construction Phase in Malaysia, *Journal of the Malaysian Institute of Planners*, 21(2), 80-123.

- Moore, J. T., Cigularov, K. P., Sampson, J. M., Rosecrance, J. C., & Chen, P. Y. (2013). Construction workers' reasons for not reporting work-related injuries: An exploratory study. *International Journal of Occupational Safety and Ergonomics*, 19(1), 97–105.
- Malaysia (1994), Occupational Safety and Health, 1994 (OSHA)
- Nur Adilla Ab. Hadi, Shamsul Bahri Md Tamrin, Ng Yee Guan, Vivien How, Rozana Abd Rahman, (2017) Association between non-reporting of accident and contributing factors in Malaysia's construction industry. *The Japanese Journal of Ergonomics*, 53 (suppl. 17), 648 - 651.
- Noorhayatie Yusof and Mohd Saidin Misnan (2019b) A Review of safety issues among small grade contractors in construction industry, *MATEC Web of Conferences. EDP Sciences*, 20 Feb. 2019. Vol. 266, 05008. 1-7.
- Noorhayatie Yusof & Mohd Saidin Misnan (2019bc) Relationship between medium and large grade contractors on implementing safety management in construction site, *International Journal of Engineering and Advanced Technology (IJEAT)*. 8(5C), 384-390, Sept. 2019.
- Noorhayatie Yusof and Mohd Saidin Misnan (2019a) Restriction factors to implement safety practices in small grade contractors, *International Journal of Built Environment and Sustainability*, 6(1-2),15-21.
- Rumaizah Mohd Nordin, Ezlina Mohd Ahnuar, Md. Asrul Nasid Masrom, Naseem Ameer Ali (2023) Examining Corruption Issues in Malaysia Construction Industry: Partaker Perspectives, *Journal of the Malaysian Institute of Planners*, 21(2), 52-68.
- Wan Faida Wan Azmi and Mohd Saidin Misnan (2018). Stakeholders' attitude towards construction workers' safety and health, *Journal of Engineering and Applied Sciences*, 13(SI 9), 6950-6953
- Williams, S. O., Hamid, R. A., Misnan, M. S., and Ogunbode, B. A. (2018). Management of construction safety: The failure and success of stakeholders. *International Journal of Academic Research in Business and Social Sciences*, 8(9), 58–68.
- Williams, O. S., R.A. Hamid, M. S. Misnan (2019a). Critical review of construction accidents causation theories and models: the need for improved model, *International Journal of Engineering, IT and Scientific Research (IJEISR)*, 3(2), 23-29.
- Williams, S. O., Razali Abdul Hamid, and Mohd Saidin Misnan (2019b). Causes of building construction related accident in the south-western states of Nigeria. *International Journal of Built Environment and Sustainability*, 6(1), 14-22.

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