THE EFFECT OF SAFETY PRACTICES ON ORGANISATIONAL PERFORMANCE IN MALAYSIAN PUBLIC UNIVERSITIES

LINGASWARAN A/L ARJUNAN

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SENIOR LECTURER
FACULTY OF MANAGEMENT & ECONOMICS
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ABSTRACT

This study aimed to examine the effect of Safety Practices (SP) on Organizational Performance (OP) in Malaysian public universities. To test the proposed framework, this research adopted the positivist, deductive and quantitative approach. Data, which was gathered from a simple random sample of 385 academicians from 20 Malaysian public universities using an online questionnaire, was analysed using multiple regression. The findings showed that there was a positive and significant effect of Safety Management and Leadership (SML) on OP (β=0.314, p=0.000), Safety Policy, Procedures, and Processes (SPPP) on OP (β=0.278, p=0.000), and Workforce Safety Culture (WSC) on OP (β=0.204, p=0.000) at the significance value of 0.000. On the other hand, the findings also revealed the insignificant effect of Safety Learning and Training (SLT) on OP (β=0.029, p=0.395) through SP implementation. Besides, the Safety Practice Performance Improvement (SPPI) Tool developed in this study could serve as a significant tool in selecting the best faculty in safety performance. In conclusion, Malaysian universities should implement the SML, SPPP and WSC to improve the organisational performance in universities. The implication of this study contributes to the Occupational Safety and Health (OSH) literature by linking the SP on OP.

KESAN AMALAN KESELAMATAN KE ATAS PRESTASI ORGANISASI BAGI UNIVERSITI AWAM DI MALAYSIA

ABSTRAK

Kajian ini bertujuan menentukan kesan amalan keselamatan (SP) ke atas prestasi organisasi (OP) di universiti awam Malaysia. Bagi menguji kerangka kerja yang dicadangkan, penyelidikan ini menggunakan pendekatan positivis, deduktif dan kuantitatif. Data, telah dikumpulkan dari sampel rawak mudah melibatkan 385 ahli akademik dari 20 universiti awam Malaysia dan menggunakan borang soal selidik dalam talian, dianalisis menggunakan regresi berganda. Dapatan kajian menunjukkan bahawa terdapat kesan positif dan signifikan pengurusan keselamatan dan kepimpinan (SML) ke atas OP (β=0.314, p=0.000), dasar, prosedur dan proses keselamatan (SPPP) ke atas OP (β=0.278, p=0.000) dan budaya keselamatan tenaga kerja (WSC) ke atas OP (β=0.204, p=0.000) pada nilai signifikan 0.000. Sebaliknya, penemuan ini juga menunjukkan kesan tidak signifikan pembelajaran dan latihan keselamatan (SLT) ke atas OP (β=0.029, p=0.395) melalui pelaksanaan SP. Di samping itu, Alat Peningkatan Prestasi Amalan Keselamatan (SPPI) yang dikembangkan dalam kajian ini dapat berfungsi sebagai alat yang signifikan dalam memilih fakulti terbaik dalam prestasi keselamatan. Kesimpulannya, universiti di Malaysia harus melaksanakan SML, SPPP dan WSC untuk meningkatkan prestasi organisasi di universiti. Implikasi kajian ini menyumbang kepada literatur keselamatan dan kesihatan pekerjaan dengan menghubungkan SP ke atas OP.

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LIST OF ABBREVIATIONS

AHP	Analytic Hierarchy Process
BSC	Balanced Scorecard
DOSH	Department of Occupational Safety and Health
EFA	Exploratory Factor Analysis
df	Degree of Freedom
HEIs	Higher Education Institutions
HRM	Human Resource Management
HSG65	Successful Health and Safety Management
LFS	Labour Force Survey
LMX	Leader-Member-Exchange
MOE	Malaysia Ministry of Education
MOHE	Ministry of Higher Education
NIOSH	National Institute of Occupational Safety and Health
OP	Organisation Performance
OSH	Occupational Safety and Health
OSHA	Occupational Safety and Health Administration
OSH-MP	Occupational Safety and Health -Master Plan
OSHMS	Occupational Safety and Health Management System
OHSAS	Occupational Health and Safety Assessment Series
PMA	Performance Measurement Association
PMS	Performance Measurement Systems
PPE	Personal Protection Equipment

QMS	Quality Management System
RIDDOR	Diseases and Dangerous Occurrences Regulations
R&D	Research and Development
SET	Social Exchange Theory
SLT	Safety Learning and Training
SML	Safety Management and Leadership
SMS	Safety Management System
SOP's	Standard Operating Procedures
SP	Safety Practices
SPPI	Safety Practice Performance Improvement Tool
SPPP	Safety Policy, Procedures, and Processes
SPSS	Statistical Package for Social Science
TSM	Total Safety Management
VIF	Variance Inflation Factor
WHO	World Health Organization
WSC	Workforce Safety Culture

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CHAPTER 1

INTRODUCTION

1.1 Introduction

This chapter provides a brief explanation of the research. Following the introduction, section 1.2 presents the background to the research, while section 1.3 specifies the research problem. Further, section 1.4 overviews the study objectives. Section 1.5 outlines the research questions during the section. Section 1.6 details the research hypothesis. Section 1.7 designs the theoretical framework of research. Section 1.8 and section 1.9 describe the importance of research and study limitations. Finally, section 1.10 provides the operational definition used in this research.

1.2 Background Research

A safe working environment is essential for employees of all ages. Without it, they are unable to focus on learning the skills needed for a successful career and future. When safety is part of the working setting, all employees are affected in some ways Not all employees fall into the actual categories of victims of safety issues however there is a huge probability for an employee to face safety issues throughout his career.

Safety issues become more complicated and dynamic due to various systems and operations that have been applied in the workplace. According to Reinhold, Siirak, and Tint (2014), the application of new technologies and complicated operating systems will create a new hazard. Employees and employers should have more awareness of their potential hazards and threats in their workplace for developing a safe environment. The goal of safety and health program at the workplace is to prevent accidents or incidents and enhance organisational performance hence safety practices play a crucial role to enhance organisational performance (Zohar, 2003; Griffin & Curcuruto, 2016; Otitolaiye, 2016; Goetsh, 2019). Safety practices explain employees' attitude and employees' behaviour in the workplace, which are is related to their knowledge, skills and abilities. It also indirectly reflects organisational safety goals and performance. The safety activities and accident prevention program need employees' and employers' commitment and involvement (Alolah, 2014b; Goetsch, 2019). Due to these potential hazards at the workplace, in February 1994, the Malaysian government had inaugurated the Occupational Safety and Health Act which is a compulsory application to all industries except the shipping and arm forces (Occupational Safety &

Health Act, 1994.) Thus, the employers, employees and self-employed have their responsibilities and duties to prevent accidents at the workplace.

Occupational safety and health practices have existed ever since the industrial revolution age, which was taking place across European countries. To maintain and monitor safety at workplace among the employees, National Institute of Occupational Safety and Health (NIOSH) in 1992 and Department Occupational Safety and Health (DOSH) in 1995 were developed by the Malaysian government. These two organisations are just more of the same in term of ensuring the safety-related prevention programme in every occupational safety and health throughout the whole country. Specifically, DOSH is completely responsible for occupational safety and health practice while NIOSH is responsible for providing services mainly in training, consultation, examination assessment and conducting research and development (R&D). Safety aspects in the workplace to all existing organisations have been enhanced by adapting occupational safety and health in operational management. Dessler (2011) stated that OSH provides a judicial outline to ensure safety, health and welfare for all the employees as well as to protect them from any health or safety risks.

Safety practices are required to be managed and controlled to achieve a high level of safety performance. In this regards, the top management of the organisation provides leadership, authority and coordination of the resources (Alolah, 2014; Lim et al., 2016). Leadership, along with proper planning and organisation, communication, and training, can improve the employees' productivity at the workplace. Furthermore, an organisation can have a proactive approach to safety practices only if the top organisational management is not only committed to these practices but also show their

visible presence in the safety-related activities. Additionally, executives, non-executives, contract workers and agencies working in the plant, employees' associations, and trade unions, etc., need to be committed to the health and safety practices.

Inadequate safety practices constitute the main causes of workplace accidents. However, accidents do not take place due to a single cause but from a combination of factors which that act together. Potentially unsafe situations do not cause accidents until employees are exposed to them. Accidents can cause the result from unsafe acts or practices. These practices can be due to human elements which result from poor attitudes, physical conditions and lack of knowledge or skills to enable one to work safely (Jaafar et al., 2017). These are also caused by the result of unsafe conditions of equipment or materials (Håvold & Nesset, 2009; Siddula, Dai, Ye, & Fan, 2016; Morrish, 2017). All the accidents bring pain and suffering to the employees and their families. When the accidents result in permanent disability, the consequences are disastrous for both the victim employees and the organisation. The employees lose their earning capacity and ability to enjoy a normal active life, and the organisation loses trained experienced employees.

Many studies found that having good safety practices at the workplace would help in reducing calamity, for example, accident rates, injuries and material damages. (Zohar, 2003; Griffin & Neal, 2016; Goetsh, 2019). Hence, it will develop a safe environment while working and consequently mounts the employees' motivation and reduce absenteeism among the employees (Fernandez-Muniz et al., 2009). Danger or hazard of occupation is different based on the type of industry and working

environment the workforces are dealing in. For example, a high risk of occupation is having greater risk towards the accident compared to the less risky occupational condition. Bowander (1987) clarified that there were different types of errors, namely; human error, technological error and systematic error which causes accidents to occur.

There is a negative impact on organisational performance when the safety practices in the organisation are lacking (Chiek Desa, Habidin, Hibadullah, Mohd Fuzi, & Mohd Zamri, 2013; Upadhaya, Munir, & Blount, 2014; Flach, Carroll, Dainoff, & Hamilton, 2015). The performance of the organisation suffers because of (i) interruption of production immediately after the accident, (ii) lowering of morale of the employees, (iii) employees time is needed and spent for investigating and preparing reports on the accident, (iv) recruiting and training costs for replacement employees, (v) damage to equipment and materials resulting into production loss (vi) reduction in product quality following the accident, and (vii) reduced productivity of injured employees since they are to be on light duty (Fuller, 1999; Mearns & Håvold, 2003; Mearns & Håvold, 2017). With these negative consequences, the organisation loses its ability to accomplish its set goals, and its competitive advantage position in the marketplace gets diminished.

It is now a known fact that a safer and healthier workplace contributes to an increase in productivity, more job satisfaction and stronger bottom-line results. There are four factors which that explain the link between productivity and employees' overall safety. These are (i) the need for more innovative ways to reduce the high rates of workplace injuries, (ii) the pressure to reduce the social and economic costs of injury, particularly compensation costs, (iii) the need to improve employees' productivity

without employees needing to work longer hours and taking on more work, and (iv) the need to offer good working conditions as an enticement to recruit and retain skilled employees (Ju & Rowlinson, 2014; Ministry of Human Resources, 2015).

Safety practices in the organisation are meant for preventing accidents and incidences in the workplaces and protecting the employees from injury and occupational diseases due to the hazards and risks presented at the workplaces (Benjamin, 2008; Sinelnikov, Inouye, & Kerper, 2015; Nurul Fadly Habidin, Anis Fadzlin Mohd Zubir, Nursyazwani Mohd Fuzi, 2017). The presence of hazards at the workplace can harm, injure, and cause an unsafe environment to the employees or damage the plant and equipment or the facilities available at the workplace (Kaliannan, 2016). Despite the efforts of many people to promote safe practices over the past several years, the number of unintentional injuries remains an enigma in the education sector.

Universities are often regarded as sanctuaries, protected environments where young people explore great ideas in a collegial atmosphere and make lifelong friendships (Alolah et al., 2014). For example, incidents on campus are shocking for the extended campus community especially in safety, evoking questions about whether there is any safety. An abundance of these evidence indicates that campuses are not immune to such incidents. There are many types of campus safety issues including rape, fire, assault, fighting, dating violence, sexual harassment, hate and bias-related violence, stalking, rioting, disorderly conduct, vandalism, and even self-harm and suicide (Alolah, 2013; Lim et al., 2016).

Along with other incidents and accidents that had frequently been occurring in different Malaysian public universities raised government concerns. As a consequence, their attention focused on searching for appropriate methods to develop and apply safety management systems within public universities. In light of the government's awareness of the importance of safety management systems, the Ministry of Higher Education (MOHE) spent more than one million Ringgit annually on the development of safety systems in their public universities buildings (Ministry of Finance Malaysia, 2017). Besides, lessons learned from community-based prevention research point to a set of best safety practices to guide the development, implementation, and evaluation of interventions to improve campus health and safety (Persson, 2015). As a result, the MOHE has introduced safety rules to regulate aspects related to universities' safety and the associated risk factors (Law of Malaysia: Universities and Colleges Act, 2012). These regulations aim to ensure student's safety and to decrease the rate of accidents and incidents. These regulations include several aspects, such as aid courses for academicians, laboratory safety guidelines, and student supervision. Even although there are a lot of safety practices that we follow, yet accidents and incidents are still happening; thus, empirical research on the topic is warranted.

A safety measurement should be designed in line with current business needs, quality initiatives program, capacity and development of new technology, increased global competition, and civilising work towards continuous improvement, to ensure the successful implementation of quality initiatives in enhancing organisational performance (Bourne et al., 2003; Shabudin, 2012; Podgórski, 2015; Strauch, 2015; Maya, 2017). Thus, both financial and non-financial performance are required by the

organisation because the current business era requires not only quality initiatives as a business strategy but also as a business system that emphasises aspects of financial, quality processes, stakeholder satisfaction and innovation.

In line with this, there is a need for universities to integrate initiatives between safety practices and the Balanced Scorecard (BSC). BSC will serve as a tool for performance measurement to translate organisational strategies into action-oriented plans (Kaplan & Norton, 1996a). BSC also provides useful guidance to the organisation and industry, particularly to the education industry in evaluating and measuring the safety practices performances in BSC way.

This study is not only limited to providing a structural relationship between the safety practices and organisational performance but also to develop a quality tool that serves as a structured guideline for the implementation and assists in the decision-making process of evaluating and measuring performance. Therefore, it is better and easier if the organisation develops a systematic tool to assist the decision-making process in evaluating safety practices. Based on that, this study focuses on techniques to integrate Analytical Hierarchy Process (AHP) and Excel-based system into the overall process of decision making to the organisation by providing a simple, friendly, more structured and systematic approach. Thus, a new quality tool is developed and serves as a tool to assist in the strategic decision-making process for evaluating safety practices which are known as Safety Practice Performance Improvement (SPPI) tool.

To ensure acceptance and suitability for the practice, SPPI should firstly authenticate several experts from Malaysian public universities. Therefore, it is hoped

that the development of SPPI tool could contribute to the education industry in helping the Director of OSH in public universities to make decisions for evaluation safety practices. Through this tool, organisations can enhance a better understanding of the management, development and improvement of safety so that they can identify the strengths and weaknesses to make improvements to their safety practices. Finally, the developed SPPI tool creates a strategic business system involving business process excellence, strategic implementation and focuses on enhancing performance. At the same time, it could also serve as a platform for the public higher education institutions in enhancing safety practices and organisational performance measures.

1.3 Problem Statement

University communities expect that employers will ensure that people who come into the university will go home at the end of the day as healthy as they arrived. Reality is in the education sector, academicians exposed to injuries and illnesses associated with manual handling, slips, trips and falls, Other common hazards and risks such as plant and equipment, hazardous substances and dangerous goods, health and safety of contractors (Victoria, 2017). Hence, safety practices are needed in the organisation for a smooth working environment. Safety practices are needed for the academician and non-academician. According to Ministry of Human Resources (2015), These practices rely on the cooperation of both the management and the staff to ensure a 'self-generating effort' between 'those who create the risks and those who work with them'.

Many expectations are built into the current health and safety legislation, which specifies the responsibilities of employer and employees about safe working practices. These suppositions are more likely to be fulfilled if a positive cultural attitude toward safety exists in the organisation (Strauch, 2015; Håvold, 2017). As employees become more educated, they are more likely to expect safer working conditions (Vredenburgh, 2002). A more safe and environmentally conscious workforce are is increasingly willing to express its disapproval if the organisation is perceived to behave carelessly on the safety aspects.

In the Occupational Safety and Health Act 1994 (Act 514), universities must ensure the health, safety, and welfare of all students, lecturers, executives and other persons using the premises. The Act places a general duty on lecturers and executives to take reasonable care of their health and safety and of any other persons who may be affected by their acts or omissions at work (Humphreys, 2007; Hassan et al., 2018). Aiming for high standards of health and safety is the right thing to do and is not just about legal compliance. Achieving and proving excellence in the way health and safety risks managed to have massive benefits for any educational institution. Hazard and vulnerability assessment is considered as a key aspect of safety strategies for any organisation.

Figure 1.1. Work-Related Ill Health in Education Compared to Industries with Similar Work Activities. Source: LFS, annual average 2015/16-2017/18

According to the Labour Force Survey (LFS), from the Education statistics in Great Britain 2017/2018, showed that in the education field, there were was 132,000 work-related ill health cases (new or long-standing). The report illustrated that 3.8% of the workers in the education sector suffered from work-related ill-health (new or longstanding cases). This rate is statistically significantly higher for workers across all industries (3.2%). This report provides a profile of workplace health and safety in the education sector based on Labour Force Survey 2015/16-2017/18. For work-related injuries, fatalities in education, there was one fatal injury to workers in 2017/18 and seven fatalities over the last five years (Diseases and Dangerous Occurrences Regulations (RIDDOR), 2017/18; RIDDOR, 2013/14-2017/18). Based on the LFS, the annual average 2015/16-2017/18 shows 53,000 non-fatal injuries to education workers each year. Refer to figure 1.2, proportions of non-fatal injuries shown for the most common five kinds. Slips, trips and falls on the same level are the highest 42% non-fatal injuries among education workers compared to all industries. Physical assault is 11 % in the education sector slightly higher compared to all industries. Meanwhile,

Lifting and handling injuries (11%), struck by an object (8%) and fall from height (7%) is lower than all industries.

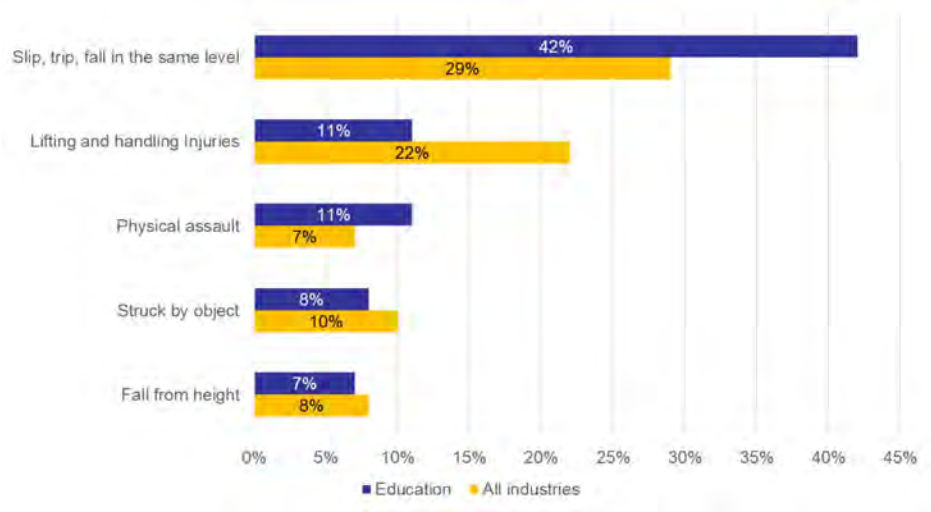

Figure 1.2. Non-Fatal Injuries in Education Compared with all Industries. Source: Non-fatal injuries reported under RIDDOR 2015/16-2017/18

Several accidents are traced as unsafe behaviours (Institution of Occupational Safety, 2012; Hassan et al., 2018; Arjunan, L., Habidin, N. F., Yusof, M. S., & Muniandy, R., 2019). Poorly designed equipment or operations, poor systems and poor working conditions can all encourage unsafe behaviours, but these behaviours are not inevitable. An organisation's attitudes and values regarding the safe working environment are important factors that influence its approach to work and safety performance (Hassan et al., 2018). In other words, it is not enough to provide safe equipment, systems and procedures if the culture does not encourage a healthy and safe working environment.

The accidents rate in public universities can decrease if academicians are exposed to issues of occupational safety and health (Iicba, 2018). This means that academicians play an important role in practising safe and healthy practices while they

are in the campus surroundings (Hassan et al., 2017; Arjunan et al., 2019). Thus, the university community needs to build a culture of safety in public universities to maintain a safer work environment. These suggest that the involvement of all communities is the foundation of developing a safe culture in public universities (Mohd Saidin Misnan, Abdul Hakim Mohammed, & Abdul Rahman Dalib, 2011). Safety culture is defined as consisting of shared values (what is important) and beliefs (how things work) to produce behavioural standards which interact with an organisations' structure and control systems (Institution of Occupational Safety, 2012). Safety culture can also be explained as a combination of how people feel about safety which is about the safety climate, what they do and the policies and procedures that an organisation has implemented in the workplace (Cooper, 2000; David Walters., 2017; Hassan et al., 2018). Apart from that, one way of identifying the need to improve an organisation's health and safety culture is to evaluate the current safety climate. Safety climate surveys describe an organisation's culture using some factors including how much employees understand and communicate about safety and health, how committed and responsible they are to maintain their health and other people's health (Institution of Occupational Safety, 2012). All levels of management and employee must provide their support (David Walters., 2017). Through a comprehensive environment, the concept of employee engagement is the process of worker solidarity, participation, and contribution in the process of improving safety and health (Goetsch, 2019).

Students, lecturers, and management must be committed to every programme conducted to build more awareness of safety at work. A strong commitment from the management is very important in terms of safety and health, especially in providing basic occupational safety and health as well as in the implementation of those policies.

The management must plan and carry out programs prioritised according to the needs of the work area or related activities such as identifying hazards, provide safety committees, training employees, conducting workplace inspections, investigating accidents, and supplying personal protective equipment. The implementation of these activities should be monitored, updated and improved on an ongoing basis assessment to ensure its effectiveness (Wan Ismail, 2012).

Apart from that, management is one of the important things that need to be taken seriously in every work. The commitment of the management is needed to ensure the safety of students is maintained while doing some activities in the universities such as in workshops or laboratories (Hassan et al., 2018). Safety environment will not be implemented without the cooperation of students and lecturers themselves. Their role adheres to all the regulations, directives, and measures on health and safety management in Higher Education Institutions (HEIs). That, to achieve Total Safety Management (TSM) management of occupational safety and health cannot be viewed as insignificant and isolated from the total management of an organisation (Kontogiannis, Leva, & Balfe, 2017).

Some studies stated that the safety culture of an organisation is related to attitude, behaviour, system and environmental factors which were implemented by the organisation for creating and maintaining effective safety and health management system (Misnan, 2011). Brad Dhal's studies showed that the lecturers' perception regarding public universities safety was affected by almost the same factors (Dahl, B., 2012). Those factors included commitment, personal characteristics, contextual characteristics, processes and environmental factors. In other studies, some of the

teachers reported that relationships and the learning atmosphere are key factors in making the university's ground safe. Lecturers who work in the same universities have different perceptions towards the university's safety due to the differences in their experiences, perspectives, ages or roles in their universities management structures (Booren, Handy, & Power, 2011).

Promoting safety in the workplace is a key component of every organisation. The measurement of perception regarding safety among employees in their workplace is one method to gather information on this topic (Booren et al., 2011). Information gathered from the corresponding organisation will help in gaining a better understanding of employees' perceptions, as well as improving their ability to evaluate and maintain existing initiatives and design new programmes to implement a safer and healthier environment in the workplace.

Safety practices closely linked to the employees' productivity at the workplace and hence have a major contribution to the performance of the organisation. It is often said that the safe workplaces are profitable, whether measured in terms of the organisational bottom line, its market share, its broader consumer reputation, or its ability to attract and retain employees (Ismail, Doostdar, & Harun, 2012; Haizam, Saudi, Shakir, & Mahmud, 2017). Accordingly, safe workplaces considered to be productive workplaces too. Moreover, a healthy and safe work environment helps to reduce costs and to improve organisational effectiveness.

There exists a cyclic relationship between safety practices and organisational performance. Healthy and safe employees are more productive, leading to increased

investment in the safety practices to reduce accidents, which in turn lead to further productivity gains (Mearns, Hope, Ford, & Tetrick, 2010; Feng, Teo, Ling, & Low, 2014; Hannie, 2015; Farouk, 2017). The genuine productivity gains can be realized by those organisations which invest in high-performance health and safety practices. Hence, the organisational management is to recognize that there is a need to have a positive attitude towards safety practices and the organisation is required to move on towards implementing the best safety practices instead of simply attaining minimum legal compliance (Institution of Occupational Safety, 2012; Ismail, Farhan., Badzis & Siraje, 2016). Organisational performance is influenced by many factors. Besides health and safety practices, some of the other factors include committed employees, decision making, employees' knowledge and training, systematic working, employees' motivational activities, the delegation of power, a performance measurement system, and so on. While working, it is important for the employees to feel healthy and safe and comfortable with their working environment (Chiek Desa et al., 2013; Nordlöf, Wiitavaara, Winblad, Wijk, & Westerling, 2015). The feeling of safety and comfort in a workplace can be achieved with the implementation of safety practices in the organisation. Though the safety practices have a very big impact on organisational performance, it is presently largely measured by the negative outcomes such as workplace injury and illness. However, these methods of measuring have a shortfall; for instance, a low incidence of injury does not necessarily mean that adequate safety systems and controls are in place (Yaacob, 2015).

As a result, the MOHE initiated the Department of Occupational Safety and Health (DOSH) with the responsibility to create safety awareness programmes in universities throughout the country to expose both students and lecturers to the related

issues and concerns (Ministry of Human Resources, 2015). However, safety management systems implemented in universities neither address the leading and lagging measures of safety performance nor provide methods for evaluating safety issues in Malaysian public universities.

Based on the literature support and gap of this study, this study aims to examine the effect of safety practices on organisational performance. The expected results of this study will benefit MOE to be more strategically focus on operational excellence to continually seek better improvement from the perspective of stakeholder satisfaction, process management, cost reduction, and innovative learning and growth performance. Next, apart from examining the effect, this study instrument is also used to develop a tool based on safety practices and organisational performance criteria and sub-criteria to assess safety performance for the Malaysian public universities. With this tool, it is hoped that it could help universities to reduce time in the process of measurement, saving workforce resources, and provide structured guidelines in safety practices evaluation.

1.4 Objective of the Study

The ultimate objective of this research is the development of safety practices and organisational performance tool for the Malaysian public universities system to understand and improve their safety performance. In achieving the ultimate objectives and providing answers to the research questions, this research identifies how safety practice contributes to organisational performance. Specifically, this research attempts:

1) To examine the effect of Safety Management and Leadership (SML) on organisational performance of Malaysian public universities.

2) To examine the effect of Safety Learning and Training (SLT) on organisational performance of Malaysian public universities.

3) To examine the effect of Safety Policy, Process and Procedure (SPPP) on organisational performance of Malaysian public universities.

4) To examine the effect of Workforce Safety Culture (WSC) on organisational performance of Malaysian public universities.

5) To develop and validate a tool to assess safety practice measures for the Malaysian public universities.

1.5 Research Questions

Thus, the question of how to develop strong safety practices and organisational performance tool is the main problem to be addressed in this research. Furthermore, to fill the gaps, the research question is subdivided into the following questions:

RQ1: What is the effect of Safety Management and Leadership (SML) on organisational performance of Malaysian public universities?

RQ2: What is the effect of Safety Learning and Training (SLT) on organisational performance of Malaysian public universities?

RQ3: What is the effect of Safety Policy, Process and Procedure (SPPP) on organisational performance of Malaysian public universities?

RQ4: What is the effect of Workforce Safety Culture (WSC) on organisational performance of Malaysian public universities?

RQ5: How to develop and validate a tool to assess safety practice measures for Malaysian public universities?

1.6 Research Hypotheses

H1 There is a significant effect between Safety Management and Leadership (SML) and organisational performance of Malaysian public universities.

H2 There is a significant effect between Safety Learning and Training (SLT) and organisational performance of Malaysian public universities.

H3 There is a significant effect between Safety Policy, Process and Procedure (SPPP) and organisational performance of Malaysian public universities.

H4 There is a significant effect between Workforce Safety Cultures (WSC) and organisational performance of Malaysian public universities.

1.7 Theoretical Framework of Research

The research model aims at analysing the impact of safety practice on organisational performance in Malaysian public universities. In the context of this study, the researcher will use the Social Exchange Theory (SET) as a research guide.

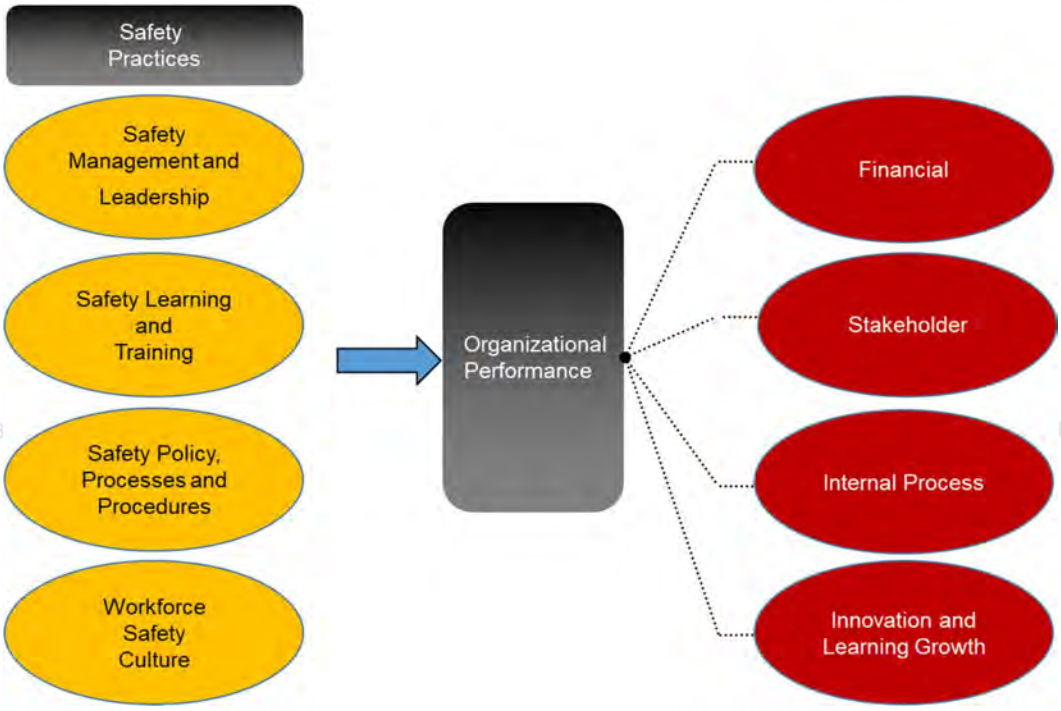

Figure 1.3. The Proposed Research Model

Social Exchange Theory (SET) assumes that there are tangible and intangible positive benefits and outcomes for all stakeholders from effective workplace relationships (Cropanzano & Mitchell, 2005). In theory, effective social interactions between employer and employees build trust and positive socio-emotional feelings that in turn, result in mutually beneficial reciprocity in behaviours. Employees benefit from the extra resources, information, autonomy and respect are given to them by

management; managers benefit because of the support they receive from employees for their decision-making, and the organisation benefits from increased efficiency and effectiveness resulting from high levels of co-operation amongst colleagues (Shore et al., 2011).

In the context of this study, researchers use SET to form a conceptual framework. A critical review of published factors enabled the researcher to select those factors which underpinned the foundations for a conceptual, organisational performance BSC. However, any organisational BSC framework conceptualisation process would require careful consideration of the Malaysian context, especially its cultural dimensions. Conceptual development of the organisational performance BSC framework for Malaysia public universities identified four perspectives in this research, use as independent variables, are: (1) Safety Management & Leadership (2) Safety Learning & Training (3) Safety Policy, Processes & Procedures and the last independent variable is (4) Workforce Safety Culture. These four independent variables were derived from a systematic review dan previous research (Bigelow & Robson, 2005; Robson et al., 2007; Thomas, 2012; Alolah, Stewart, Panuwatwanich, & Mohamed, 2014; Chandrakantan Subramaniam, Faridahwati Mohd. Shamsudin, Md. Lazim Mohd Zin, Subramaniam Sri Ramalu, 2016). These four factors were tested and analysed to identify whether these independent variables influence performance or vice versa. On the other hand, dependent variables are variables that can be influenced by other variables. In this study, the dependent variable is organisational performance. The dependent variable derived from previous research (Kaplan & Norton, 1996; Storey, 2002; Jusoh & Parnell, 2008; Wu, Lin, & Chang, 2011; Yüksel & Coşkun, 2013). In

this research, dependent variables are (1) Financial (2) Stakeholder (3) Internal Process and (4) Innovation and Learning Growth.

1.8 Significance of the Study

Safety in universities is very important to a wide range of stakeholders (e.g. parents, staff and administrators, students, etc.). Furthermore, the number of accidents can be used as an indicator of the need to review or install safety systems. Several studies are identified and reported on the causes of campus accidents (Rundmo & Hale, 2003). Although the increased numbers of campus accidents have gained considerable research attention, there is still a lack of research on how to ensure the correct application of safety systems. This lack of research is more prevalent in developing countries, such as Malaysia.

In response to the existing campus safety-related issues in Malaysia, the current research develops safety practices and organisational performance tool for Malaysian public universities. This study will review the possibility of applying a safety management system in public universities buildings. The study will develop a tool for public universities to evaluate safety practice and test in several public universities in Malaysia.

This research will contribute to the existing body of knowledge by proposing and validating a safety measurement system using a tool. It is expected that the proposed safety measurement framework can be used to assess the safety of not only

Malaysian public universities but also other HEIs in our country that are looking for an effective safety measurement system. Thus, the study also examines the causes of campus accidents systematically and comprehensively. Hence, one of the main outcomes of the research will be the linking of theoretical assumptions to the practical facts which, in turn, can enrich the body of knowledge in the safety literature. Table 1.1 summarises the contributions of this research.

Table 1.1

Contributions of the Research

		Level of Contribution		
		Replication	Extension	Innovation
Area of Contributions	*Conceptual*	• Clarify the concept of safety practice and organisational performance, safety management and leadership, safety learning and training, safety policy, process and procedure, workforce safety culture.	• Researcher using BSC for evaluating organisational performance such as financial, stakeholder, internal process, innovation and learning growth in safety research.	
	Methodological	• Verify the validity and reliability of scales to measure dimensions of safety practice and organisational performance.	• Test the applicability of Social Exchange Theory (SET) in the safety practice context	

(continue)

Table 1.1 *(continue)*

		Level of Contribution		
		Replication	Extension	Innovation
Area of Contributions	*Empirical*	• Confirm the interaction between safety practice and safety performance	• Verify the integrated effect of safety management and leadership, safety learning and training, safety policy, process and procedure, workforce safety culture on financial, stakeholder, internal process, innovation and learning growth.	• Identify the interaction between safety practice and organisational performance
	Managerial	• Provide accurate and comprehensive guidance on how to plan and justify safety practice	• Provide an instrument to evaluate safety practice and organisational performance.	• Safety Practice Performance Improvement (SPPI) Tool

1.9 Limitation of the Study

While this research contributes to the organisational performance domain, as in any other research, this research is limited by several factors, to refine the proposed framework, it is worth addressing such limitations in further theoretical and empirical research.

This research selects a sample, which consists of 385 Malaysian academicians of the public universities, using stratified random sampling. The stratified random sampling is reasonable to ensure representativeness of the population, by reporting

evidence from a single nation, geographical location, validity and generalizability. Therefore, the results of this research cannot necessarily be generalised beyond the population studied. As to confirm the validity of the model and expand the generalizability of the research's results in other settings, replication of this research is strictly required.

This study only focuses on the organisational performance and safety practice in the Malaysian public universities, particularly in this study only four SP will be reviewed, namely (1) Safety Management & Leadership (2) Safety Learning & Training (3) Safety Policy, Processes and Procedures and the last independent variable is (4) Workforce Safety Culture. There is another factor in SP that can be used as a whole and another mediator factor that can affect the organisation performance (OP). In determining the BSC variables, this study uses four BSC variables by Kaplan and Norton (1996a, b) as a strategic factor in supporting the SP to enhance organisational performance.

SPPI tool cannot be realised without the guidance and comments from the universities OSH experts. They are willing to sacrifice their time and give ideas to ensure that this tool is compatible with the working environment and in line with the development of the education world that is more informative and advanced in technology. The purpose of the tool supports the strategic decision-making process and systematically assesses each criterion and subcriteria in evaluating safety practice performance. Therefore, this study needs support from other Higher Education Institutions experts to evaluate and verify this SPPI tool, including the assessment by private universities experts so as for it to accept in the education industry, domestically.

Due to time and resource constraints, the SPPI tool is not studied and cannot be validated by private universities such as AIMST University, Kuala Lumpur Metropolitan University, Multimedia University, Management and Science University, Petronas University of Technology and others. If this limitation is fulfilled, there are possibilities that this tool can further improve the needs of domestic.

1.10 Operational Definitions

The following are the definitions of constructs investigated in this research.

1.10.1 Safety Practices (SP)

Safety Practices generally is written methods outlining how to perform a task with minimum risk to the people, equipment, materials, environment, and processes. Safety can identify through SML, SLT, SPPP and WSC.

1.10.2 Safety Management and Leadership (SML)

Safety Management and Leadership provides leadership, demonstrates its commitment to continuous improvement in safety and health, communicates that commitment to workers, and sets program expectations and responsibilities. Managers at all levels make safety and health a core organisational value, establish safety and health goals and objectives, provide adequate resources and support for the program, and set a good example.

1.10.3 Safety Learning and Training (SLT)

Safety Learning and Training are important tools for all workers who are trained to understand how the program works and how to carry out the responsibilities assigned

to them under the program. Employers, managers, and supervisors receive training on safety concepts and their responsibility for protecting workers' rights and responding to workers' reports and concerns. All workers are trained to recognise workplace hazards and to understand the control measures that have been implemented.

1.10.4 Safety Policy, Process and Procedure (SPPP)

Policy - Represents the foundation from goals and objectives, performance measures, and other developed system components. The policy should be short, concise, easily understood, and known by all employees in the organisation.

Process - A process crosses departments and explains how to produce a product or service. It follows the rules or policies while giving a high-level view of how something should work within a process, including who is responsible for executing it, what tasks should perform and when they should perform.

Procedure – Safe job procedures are a series of specific steps that guide, through a task from start to finish in chronological order.

1.10.5 Workforce Safety Culture (WSC)

A Workforce Safety Culture is an organisational culture that places a high level of importance on shared beliefs, values, practices and attitudes and these shared by the majority of people within the workplace, which shape their behaviour.

1.10.6 Organisational Performance (OP)

Organisational Performance establishing, reporting and tracking goals and targets that indicate whether the program is making a progress or not. Sharing the results of monitoring and evaluation within the workplace, and celebrating successes, will help

to drive further improvement. The organisational performance can be evaluated through financial, stakeholder, internal process and innovation and learning growth perspective.

1.10.7 Financial Perspective

The financial perspective describes how intangible assets will be converted into tangible value. It aims to control how a firm manages its finances and the involvement of the stakeholders in the firm's safe operation.

1.10.8 Stakeholder Perspective

The stakeholder perspective refers to the relationship of stakeholders and markets with emphasis on the stakeholders' safety wants and needs.

1.10.9 Internal Process

Internal business process refers to satisfaction of both shareholders and stakeholders. It compacts with the processes involved to transform intangible assets and financial outcomes on which organisations should excel with an operating strategy safety plan.

1.10.10 Innovation and Learning Growth

Innovation and learning growth perspective focuses on the training and education of the academicians to increase their knowledge and skill. In the meantime, organisations must also know how to maintain their competitive advantage in the market through human capital development.