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ASSESSING THE NEED FOR AN OCCUPATIONAL SAFETY AND HEALTH CURRICULUM IN TVET INSTITUTIONS: PERSPECTIVES OF INSTRUCTORS AND INDUSTRY

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Abstract:

Occupational safety and health are critical aspects of skills training and are sometimes overlooked in technical education curricula. This study explores the new curriculum requirements for occupational health and safety modules in skills training programs in Malaysia, specifically GIATMARA. The mixed approach used involved the needs analysis of 269 teaching staffs in the first phase of the study, as well as the Fuzzy Delphi technique involving 12 experts in the second phase of the study. The needs analysis data shows that there is a gap in the existing safety module, and there is a need for a safety and health curriculum for GIATMARA trainees. At the same time, the Fuzzy Delphi analysis that uses an acceptance value of more than 75 per cent found that there are five main components required in the safety and health curriculum for skills programs, namely safety motivation, safety training, safety communication, safety rules and procedures, and safety knowledge. In conclusion, this study emphasizes the need for a more flexible and inclusive curriculum development strategy, taking into account global skills needs, technology integration, and the active involvement of stakeholders in skills education. The findings of this study can be used as a guide in forming occupational health and safety modules in Malaysian skill institutions, especially GIATMARA.

Keywords:

Needs Analysis, Occupational Safety and Health Curriculum, TVET Education

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Introduction

The rapid development of industrial technology requires an increase in the number of skilled workers in Malaysia. In the National Prosperity Vision 2030, Malaysia predicts that the skilled workforce will increase by 35 per cent or equivalent to 350,000 people, by the year 2030. This rate is expected to grow between 1.2 to 1.9 per cent each year. This data underlines the critical role of skills trainees as a significant contributor to achieving the status of a developed country. Therefore, to meet the needs of the industrial workforce, trainees need to be trained to have a good work attitude as well as positive values such as discipline, diligence, and dedication. Vocational education refers to the ability, natural talent, and individual expertise, whether in the form of technical skills hard skills or soft skills (Hazwani & Nor Aishah, 2018). Technical and Vocational Education (TVET) plays a vital role in the development of individual potential, in accordance with the aspirations of the Malaysian Ministry of Education to develop a world-class education system. This effort is essential to maximize the potential of trainees and help meet the nation's development goals. According to the Employment & Labour Statistics report Series 30 bill 4/2021, 13 ministries in Malaysia provide skills training through Public Skills Training Institutes (ILKA) across the country. GIATMARA Malaysia, as a subsidiary of Majlis Amanah Rakyat (MARA), is one of the skills training centres operating under the Ministry of Rural and Regional Development (KKDW).

GIATMARA was established in 1986 with the aim of providing technical and vocational skills training to youth, both in urban and rural areas. This training program aims to prepare participants to become skilled workers or entrepreneurs in the technical field. At the same time, this effort helps the B40 group by giving them the skills needed to increase their family income, thus improving their standard of living. The skills training offered by GIATMARA is a continuation of the skills program supervised by the Skills Development Department (JPK) under the Ministry of Human Resources, which is responsible for mainstreaming TVET as a key component in the transformation of the Malaysian economy. The variety of programs implemented by GIATMARA affirms its role as an important public skills training institution in Malaysia, providing various skill areas based on Technical and Vocational Education and Training (TVET). This is in line with the government's aspiration to produce a skilled and semi-skilled workforce that can contribute to the development of Malaysia towards becoming a developed country.

The selection of GIATMARA as the focus of research in the field of occupational safety and health is appropriate, given its important role in training a skilled workforce in Malaysia through 232 training centres throughout the country (Official GIATMARA Website). By offering a program that includes technical skills and soft skills, GIATMARA provides comprehensive training to trainees. This study is very relevant to evaluate and update the existing safety curriculum to ensure it is in line with industry needs and is in compliance with current laws. These improvements will not only strengthen aspects of workplace safety but will also contribute to achieving the goals of the National Prosperity Vision 2030 by creating a more competitive and safer workforce.

Curriculum Development

Curriculum is a complex and dynamic process that involves different procedures to improve the existing situation. The lack of different ideas or modes of curriculum development and planning increases the complexity. There are various important curriculum models, such as Ralph Tyler, the Hilda Taba model, and the Wheeler model, which can be used as a reference

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in the curriculum development process. Curriculum development is important in planning education and training. To produce positive change, the curriculum must be purposeful, planned, and progressive. The objective of curriculum development is based on appropriate training needs so that it is suitable at the individual and community levels. A model is a sample that provides guidelines for educational purposes. The model is used in curriculum development for better output (Oliva, 2009). This study examines the critical stage in three curriculum development models known as Tyler, Taba, and Wheeler. The use of specific teaching, learning, and assessment strategies to plan basic principles curriculum development models needs to be clearly and systematically designed (Ornstein et al., 2017).

Workplace

The importance of fostering a culture of safety in the workplace cannot be disputed. A safe workplace is not just a legal requirement; it is a strategic investment that contributes to the overall success and well-being of an organization. This article examines the key components of creating a safe workplace and the transformative effects of such a culture on employees and the organization as a whole. A "safe workplace" refers to an environment where measures are taken to protect the overall health, well-being and safety of employees and visitors. This includes physical, mental and emotional well-being. The goal of creating a safe workplace is to prevent accidents, injuries and illnesses while promoting a positive and healthy work environment. Safety preference can be described as an individual's view of health and safety and how they feel safe at work.

Most workers spend their lives at work, where they are exposed to various sources of danger. A proper and comprehensive safety management system in an organization can help reduce workplace accidents (Mansor, 2013). Lu et al. (2010) claimed that if employees have a positive perception of management's commitment to workplace safety, employees tend to obtain higher levels of safety motivation at work. In general, employees have the right to know the level of risk involved in their work and the actions that can be taken to manage those risks personally. This is because when employees are aware of their safety, they need to pay full attention and commit to performing work at a high level that benefits the organization.

Safety Training

Employers have an important responsibility to ensure that safety training is carried out effectively in the workplace. They need to ensure that every employee complies with the safety policies and standards that have been set. Accidents in the workplace can be avoided through the provision of systematic and quality safety training. Effective and efficient safety training can not only reduce the number of injuries and deaths but also reduce property damage, legal liability, occupational disease, and compensation claims. In addition, comprehensive safety training is also able to reduce the negative impact that may arise as a result of work activities.

According to a study by Wang et al. (2007), a lack of safety training can increase the risk of workplace accidents, thus leading to higher management costs. Good safety training not only lowers the accident rate but also plays a role in improving the overall safety performance of a company. Therefore, safety training needs to be carefully planned and implemented efficiently to ensure that employees carry out their tasks safely. This training involves activities designed to provide information, guidance, and initial steps to improve employee performance to an optimal level.

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Providing an appropriate training program is one of the most effective ways to prevent workplace accidents. Davis et al. (2022) assert that safety awareness and knowledge can be increased through training given to employees. This is especially important for new employees, who are often influenced by the safety practices of more experienced employees. Therefore, new employees should be given adequate safety training to reduce the risk of accidents. The negative influence of old employee practices can be avoided by exposure to practical and innovative safety training. This, in turn, will build a strong safety culture in the workplace. Practical safety training aims to increase the efficiency of employees in performing their tasks safely and effectively (Hassan et al., 2019). Based on the evidence of this study, it is clear that every employee needs proper safety training to ensure that safety in the workplace is always at an optimal level.

Occupational Safety and Health

Occupational Safety and Health (OSH) refers to a discipline that includes various fields of knowledge that aim to ensure the safety, health, and well-being of workers in the workplace. The main objective of PPE is to prevent work-related injuries, illnesses, and deaths, as well as promote a safe and healthy work environment. Occupational safety and health are not only important to protect the workforce but are also factors that contribute to increased productivity, employee satisfaction, and overall organizational success. Compliance with occupational health and safety standards is a legal and ethical obligation for every employer. Safety culture in the organization refers to the values, beliefs, attitudes, and behaviours shared by members of the organization related to safety. A positive safety culture is characterized by a collective commitment to safety, open communication about safety concerns, and a proactive approach to identifying and mitigating risks that could potentially threaten safety. The study found that most accidents that often occur in educational institutions are caused by a lack of personal protective equipment (PPE), improper handling of chemicals, lack of expertise, inadequate management of equipment and materials, and lack of information about safety measures (Brown, 2021).

Research Issues

In the year 2024, the growth of incidents of work accidents from year to year is proof and indication that there are weaknesses in the implementation of safety training at the workplace. This limitation seems to be closely related to aspects of occupational safety and health that need to be developed, taught, and applied to trainees before they enter the world of work after completing training or when they are involved in industry, such as through industrial training programs. Education about aspects of occupational safety and health should begin at the initial stage of training. This means that teaching staff should provide safety and health awareness to their trainees, starting from skill training centres to higher education levels in universities. Knowledge of safety and health is very important in the context of work.

The GIATMARA safety module is a very relevant topic to analyse in depth. Moreover, curriculum change should be adapted to the needs of the time. However, a review of existing safety modules shows that there has been no specific review of this module for a long time. This safety module needs to be updated in terms of learning content to be in line with the requirements of Section 15(2c) of Act 514 (amendment 2022) and the National Safety Master Plan 2021-2025, which emphasizes the need to improve the quality of occupational safety and health education (OCH) in all skills training centers to produce competent workers in the aspect of personal protective equipment (PPE).

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A preliminary review of the existing safety module found that there was no preliminary disclosure related to the matters provided for in Section 15 of the Occupational Safety and Health Act 1994 (OSHA 1994), particularly Section 15(1), stipulating that employers and self-employed individuals are responsible for ensuring safety, health, and the welfare of their employees. In order to align these requirements with the occupational health and safety curriculum for skills trainees, several important elements need to be integrated. Trainees need to be made aware of their responsibilities under the OSHA law 1994 and how to apply them in real work situations. Hazard identification and risk assessment training, including risk mitigation techniques, is critical. Safety procedures such as SOPs and the use of personal protective equipment (PPE) must be taught. In addition, first aid training and emergency procedures are also important. Employee welfare, including mental and physical well-being practices, as well as work-life balance policies, should be introduced. A safety culture needs to be instilled, encouraging employees to report hazards without fear of retaliation. Finally, the management of safety documentation, including accident records and safety audits, is essential. With these elements, skilled trainees can meet the requirements of OSHA 1994 and practice safety and health in the workplace.

The curriculum is dynamic and needs to be reviewed continuously as time progresses. Ahmad et al. (2021) suggested that the curriculum should be studied at various levels of education and focus on the skill process in the field of skills learned. The community is well aware that GIATMARA produces the nation's skilled workforce. This clearly shows the high marketability of the trainee's career after completing the skills training at GIATMARA; all qualified trainees will continue to work in the industry. Therefore, the researcher conducted a needs analysis study on the new occupational health and safety curriculum that must be learned by GIATMARA trainees. This analysis can be used as a guide to update and further improve the quality of technical and vocational skills training provided at skill institutions in Malaysia, especially GIATMARA Malaysia.

Conceptual Framework

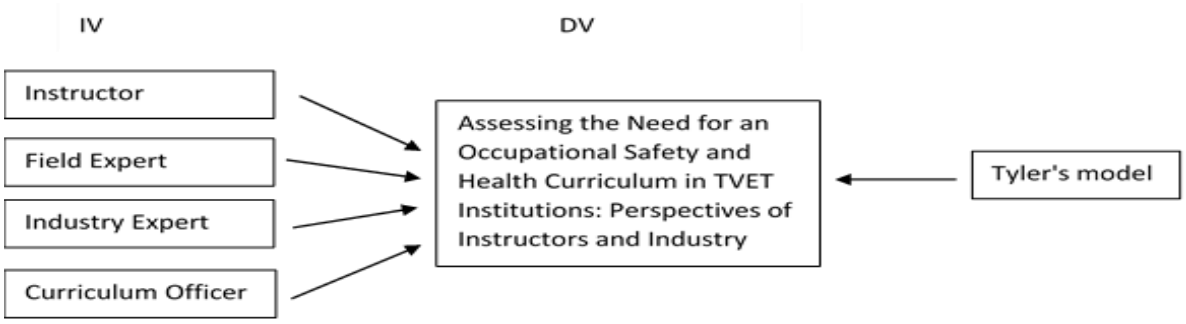

Figure 1: Conceptual Framework

The conceptual framework of this study includes four main groups that play an important role in the curriculum development process. First, the teaching staff at TVET institutions are responsible for imparting knowledge and understanding the teaching challenges related to occupational safety and health. Second, field experts who have in-depth technical knowledge as well as specific insight into workplace safety and health requirements and standards. Third, industry experts, who represent the real job sector, have the role of ensuring that the curriculum meets the practical demands of the industry and taking into account aspects of safety risks in the field. Fourth, curriculum developers work to design and organize the curriculum so that it

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is in line with industry standards and the latest technological advances. This study uses Tyler's Model as the main framework in curriculum development, with a special focus on two important elements: determining objectives and organizing curriculum content. In the context of the study of new curriculum requirements for occupational safety and health in TVET institutions, setting clear and specific objectives is important to ensure that the curriculum is in line with current industry requirements. In addition, the curriculum content needs to be carefully and comprehensively planned to provide students with relevant knowledge and skills to face safety challenges in the world of work.

Research Methods

This study uses a mixed approach that combines quantitative and qualitative methods. This approach gives the researcher the opportunity to collect and analyse existing information to gain a deeper understanding of the study subject. For statistical data analysis, data was collected through questionnaires and interviews. According to Zhang et al, (2019) although the method of data collection through a mixed approach has been used for a long time, combining them in one study design is a more modern approach. Zhang et al, (2019) explained that mixed research methodology involves the combination of quantitative and qualitative data collection and analysis in one study. The use of this approach aims to obtain more accurate information and understand the research issue better than if only one method is used (Zhao et al, 2017). In addition, this approach also serves to compensate for the weaknesses that may exist in each method individually. Overall, this study was carried out through two main phases, namely, needs analysis and validity assessment. Table 1 shows the methods used in this study.

Table 1: Research Methods

Phase	Methods
Phase1: Needs Analysis	Questionnaire
Phase 2: Development	Fuzzy Delphi

Table 1 details the method of this study. Phase one consists of a needs study phase, which aims to identify needs, determine gaps, and report on the needs of a new occupational health and safety curriculum. This phase will use the questionnaire method to obtain information. The involvement of teaching staff with more than 5 years of industry experience in various skills is an important asset for this study. Their practical experience enables the identification of real needs in occupational safety and health, as well as assessing the gaps in the existing curriculum more precisely. Their contribution through the questionnaire produced more relevant and valuable data, thus strengthening the results of the study of needs in the development of the new curriculum.

In the second phase, the fuzzy Delphi method was employed, incorporating interviews and questionnaires to gather expert opinions and identify the necessary content for the new occupational health and safety curriculum. Skulmoski et al. (2007) stated that Delphi is a good choice for research to improve our understanding of problems and opportunities and develop solutions. Although Delphi has been known as a tool for quantitative research Rowe et al. (2011) argue that Delphi is flexible enough to be used in collecting qualitative data or for mixed-method studies. Through the fuzzy Delphi method, qualitative data collection and application statistical values are used to find similarities and develop expert consensus. Data is collected from expert teams in phases or rounds.

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Respondent

For the need study phase, the research respondents involved 269 teaching staff from GIATMARA. The determination of this sample size is based on the table of Krejcie & Morgan (1970), which consists of 901 (population) GIATMARA working members in the Peninsula. A stratified random sampling technique was used, and the study population was divided into several small groups, which were determined through four main zones, namely the northern zone, the central zone, the southern zone, and the eastern zone. The distribution of respondents based on a stratified random sample is shown in Table 2.

Table 2: Sample Size of Needs Study Respondents

Zone	Number of Instructors	Number of Samples N-901	Percent (%)
Northern	318	318 x 269 = 95	35.3
Central	132	132 x 269 =43	16
Southern	219	219 x 269 =62	23
Eastern	232	232 x 269 =69	25.7
Total	901	269	100

For the development phase, 12 experts have been involved: field experts, industry experts, curriculum developers, and teaching staff. This phase aims to determine the necessity of a new occupational health and safety curriculum based on expert opinions. The selection of experts is very important in the study. In order to ensure that the expert panel involved in Fuzzy Delphi is qualified and experienced, these experts consist of field experts, industry experts, curriculum drafters and senior instructors who are actively teaching skills courses as shown in Table 3 fuzzy expert criteria.

Table 3: Fuzzy Delphi Expert Criteria

Position	Field	Experience	No. Expert
Instructors	TVET	10 years	3
Curriculum Officer	TVET	10 years	3
Field Expert	OSH	10 years	3
Industry Expert	OSH	10 years	3
Total			12

Research Instruments

The instrument used in this needs study is a questionnaire. Questionnaire is considered to be a suitable method for collecting large amounts of data Ghazali et al. (2020) and have the potential to be generalized (Johnson et al., 2019). This questionnaire is divided into six sections, namely Demographics, Safety Knowledge, Safety Rules and Procedures, Safety Training, Safety Communication, and Safety Motivation. In this study, a five-point Likert scale was used, with the answer options Strongly disagree (1), Disagree (2), Slightly agree (3), Agree (4), and Strongly agree (5). Table 4 shows the items included in the questionnaire distributed to respondents.

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Table 4: Questionnaire Items

Division	Code	Item
Demography	D	Demographic profile items focus on respondent information, such as job title, education level, age, gender and years of service.
Safety Knowledge	SK1	Safety is a priority.
	SK2	Safety knowledge is very important to apply to trainees.
	SK3	Knowledge of employee health is very important.
Safety Rules and Procedures	SRP1	The Safety Module (Existing) needs to be emphasized in relation to Act 514.
Safety Training	ST1	The existing safety module needs to be improved.
	ST2	Safety training is important for employees.
	ST3	Health training is essential for employees.
	ST4	There is a need to develop a new curriculum for occupational safety and health.
Safety Communication	SC1	Employee safety and health communication is important.
	SC2	Good safety behaviour.
Safety Motivation	SM1	The Safety Module needs to emphasize the elements of safety motivation and attitude culture.
	SM2	Occupational health motivation can help trainees.

In the development phase of this study, two types of instruments were used, namely, a structured interview protocol and a Likert scale questionnaire. Interview protocol refers to a list of questions and conversation guides prepared in the form of a framework or checklist before the researcher goes to the field (Merrill et al., 2002). An interview is a data collection technique that involves face-to-face interaction or through an online platform between the researcher and the respondent. An interview protocol is a list of questions prepared in advance to be used in an interview session. These questions are prepared in advance, and the interview session is conducted formally (Chan et al. 2020). The following is a detailed explanation of the instruments used in each fuzzy round of the development phase.

This study began with the involvement of 12 experts who agreed to participate in the first round of interviews. This interview uses the same questions as the need's analysis. The purpose of the questionnaire is to gather the views and consensus of experts in determining the new curriculum requirements for occupational safety and health in TVET Institutions. All experts will remain involved in the second round, where they will receive a questionnaire to review the items that have been adapted based on the information from the first round. In this round, experts are asked to prioritize items and explain why those priorities were chosen (Hassan et al., 2019). In this way, a consensus among experts begins to form.

In the second fuzzy round, experts were given items related to the Occupational Safety and Health Curriculum that have been arranged in a more structured way to discuss and agree. All experts were asked to state the level of importance of the agreed item and "marked (/) on the questionnaire". Each questionnaire item uses a 7-point Likert scale, where a value of 1 indicates

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"Extremely Not Important" and a value of 7 indicates "Extremely Important", as shown in Figure 2.

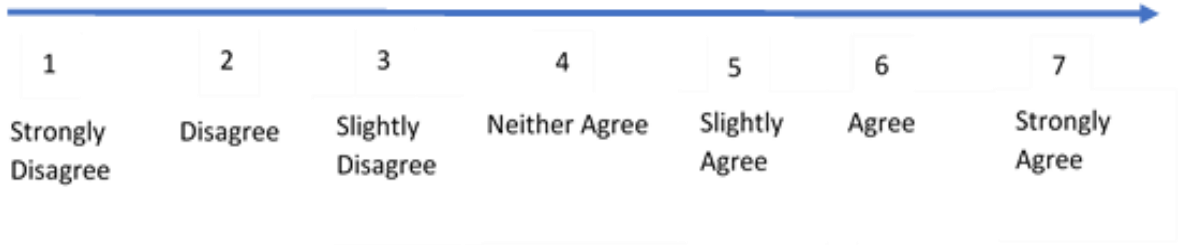

Figure 2: 7 Point Likert Scale

Validity and Reliability

The instruments used in this study have gone through the validity and reliability evaluation process. Five experts in the field of occupational safety and health have evaluated the content validity of the developed instrument. A pilot study was conducted to determine the reliability of the questionnaire. A total of 50 respondents working in public and private TVET institutions participated in this pilot study. Cronbach's alpha value obtained from the pilot study is 0.859, with N=50.

Findings of The Needs Analysis of The New Occupational Safety and Health Curriculum

A needs analysis was conducted to develop a new occupational health and safety curriculum framework relevant to trainee needs. Table 5 shows the overall mean and standard deviation (M 4.66, SD =. 48), which shows that respondents strongly agree that they are aware of the importance of occupational safety and health among skill trainees. For item S1, instructors strongly agree (M = 4.88, SD = .35) that prioritizing safety is an important thing to pay attention to. In addition, in item S2, respondents strongly agreed (M= 4.86, SD = .35) that knowledge about occupational safety and health is something that should be taught to skills trainees. As for item Q4, respondents agreed that the existing safety module needs to be improved according to the current need to improve trainee knowledge (M = 4.45, SD = .64). Item S6 shows that instructors strongly believe (M = 4.61, SD= .51) that safety training is important for employees. To answer this research question, item Q12 (M = 4.55, SD= .52) clearly shows that respondents strongly agree and there is a need to develop a new curriculum framework for occupational health and safety for skills trainees.

Table 5: Analysis of the Needs of the New Occupational Safety and Health Curriculum (n=269)

Construct of a New Curriculum Framework for Occupational Safety and Health									
Code	Item	Scale					*m*	SP	Level
		1	2	3	4	5			
S1	Safety is a priority.		1 0.4%		28 10.4%	240 89.2%	4.88	0.353	Necessary
S2	Safety knowledge is very important to apply.				39 14.5%	230 85.5%	4.86	0.353	Necessary
S3	Good safety behavior.				51 19%	218 81%	4.81	0.393	Necessary
S4	The existing safety module needs to be improved.		1 0.4%	19 7.1%	106 39.4%	143 53.2%	4.45	0.643	Necessary

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S5	The Safety Module needs to emphasize the elements of safety motivation and culture of attitude.		3 1.1%	95 36.4%	168 62.5%	4.61	0.510	Necessary
S6	Safety training is essential for employees.		4 1.5%	96 35.7%	169 62.8%	4.61	0.518	Necessary
S7	The Safety Module (Existing) needs to be emphasized in relation to Act 514.	1 0.4%	1 0.4%	88 32.7%	179 66.5%	4.65	0.507	Necessary
S8	Knowledge about employee health is very important.		2 0.7%	86 32%	181 67.3%	4.67	0.488	Necessary
S9	Health training is very important for employees.		3 1.1%	103 38.3%	163 60.6%	4.59	0.514	Necessary
S10	Employee safety and health communication is very important.		3 1.1%	97 36.1%	169 62.8%	4.62	0.509	Necessary
S11	Occupational health motivation can help trainees.		3 1.1%	103 38.3%	163 60.6%	4.59	0.514	Necessary
S12	There is a need to develop a new curriculum framework for occupational health and safety.		4 1.5%	112 41.6%	153 56.9%	4.55	0.527	Necessary
					Average Score	4.66	0.486	Necessary

Twelve experts were given questionnaire items to determine the aspects of the occupational health and safety curriculum that should be taught to skill trainees at TVET institutions. A Fuzzy Delphi technique was used to determine expert agreement on the requirements of the new occupational health and safety curriculum in relation to the needs of skill trainees. The findings of the analysis are presented in Table 6.

Table 6: The overall construct of the Occupational Safety and Health Curriculum Framework

Item	Construct	Fuzzy Triangular Conditions Numbers		Fuzzy Evaluation Process				Expert Consent
		Value *Threshold*, d	Percentage of Expert Consent, %	m1	m2	m3	Score Fuzzy (A)	
1	Safety Motivation	0.042	100%	0.867	0.983	1.000	0.950	Accept
2		0.074	100%	0.817	0.958	1.000	0.925	Accept
3		0.023	100%	0.883	0.992	1.000	0.958	Accept
4	Safety Rules & Procedures	0.023	100%	0.883	0.992	1.000	0.958	Accept
5		0.087	91.6%	0.833	0.958	0.992	0.928	Accept
6		0.074	100%	0.817	0.958	1.000	0.925	Accept
7		0.023	100%	0.883	0.992	1.000	0.958	Accept
8		0.068	100%	0.833	0.967	1.000	0.933	Accept
9	Safety Knowledge	0.000	100%	0.900	1.000	1.000	0.967	Accept
10		0.211	83.3%	0.667	0.833	0.933	0.811	Accept
11		0.023	100%	0.883	0.992	1.000	0.958	Accept

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12		0.023	100%	0.883	0.992	1.000	0.958	Accept
13		0.000	100%	0.900	1.000	1.000	0.967	Accept
14		0.098	91.6%	0.800	0.942	0.992	0.911	Accept
15		0.119	91.6%	0.750	0.908	0.975	0.878	Accept
16	Safety Communication	0.042	100%	0.867	0.983	1.000	0.950	Accept
17		0.057	100%	0.850	0.975	1.000	0.942	Accept
18		0.122	100%	0.783	0.925	0.983	0.897	Accept
19		0.000	100%	0.900	1.000	1.000	0.967	Accept
20		0.023	100%	0.883	0.992	1.000	0.958	Accept
21		0.023	100%	0.883	0.992	1.000	0.958	Accept
22		0.000	100%	0.900	1.000	1.000	0.967	Accept
23	Safety Training	0.023	100%	0.883	0.992	1.000	0.958	Accept
24		0.042	100%	0.867	0.983	1.000	0.950	Accept
25		0.249	75%	0.633	0.800	0.908	0.781	Accept
26		0.042	100%	0.867	0.983	1.000	0.950	Accept

Terms:
Triangular Fuzzy Numbers
1. Threshold value (d) ≤ 0.2
2. Expert consensus percentage ≥ 75.0%

Defuzzification Process
3. Score Fuzzy (A) ≥ value α – cut = 0.5

The analysis of the findings from Table 6 shows that the entire construct of the new curriculum item occupational safety and health has expert agreement of 75% to 100% (high consensus).

Discussion

The increase in the rate of occupational accidents every year is an indication that there is a weakness in the implementation of safety training in the workplace. This weakness is linked to occupational safety and health elements that need to be nurtured, trained and applied to trainees before they enter the world of work, either after completing training or during industrial training. Education on aspects of occupational safety and health should start from the beginning of training. This shows that teaching staff need to provide safety and health awareness to their trainees, starting at the skills training centre and continuing to higher education institutions. This study aims to examine the need for a new curriculum in occupational safety and health, especially for skill trainees in GIATMARA Malaysia.

A total of 269 respondents, consisting of male and female trainers, were involved in this study. In addition, a total of 12 experts, including curriculum developers, industry experts, field experts, and senior teaching staff, participated in this study. Study respondents are those who have worked in the field for more than ten years. The data obtained was analysed using SPSS software, with an emphasis on descriptive analysis. The results of the study show that the GIATMARA skills training program needs to implement a new curriculum for occupational safety and health. All respondents agreed that safety knowledge, safety rules and procedures, safety training, safety communication, and safety motivation are important elements that should be taught to trainees. Employee perceptions of safety performance can be improved

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when safety training is recognized as part of their performance appraisal. According to a study by Hassan et al. (2019) employees who receive safety training are more willing to take responsibility for safety in the workplace. With this new curriculum in occupational safety and health, skills training institutions like GIATMARA can help trainees find additional information about potential hazards in the workplace.

Conclusion

The main objective of this study is to design the occupational health and safety curriculum requirements for training at GIATMARA. The Tyler model is used in this study to guide the development of a new occupational safety and health curriculum for GIATMARA. This model allows for thorough guidance of all key aspects required for the curriculum's development. In conclusion, developing curricula in the age of global education necessitates constant modification, driven by a careful evaluation of students' requirements in a global setting. The goal is to ensure that the curriculum is inclusive, flexible, and relevant while taking advantage of technological advancements and encouraging international collaboration. Researchers interested in investigating curriculum management in skills education might expand on the findings of this study.

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