

The Learning and Teaching of Occupational Safety and Health Management
Module: KUKUM's Experience

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Abstract

Occupational Safety and Health Act 1994 or Act 514, requires the workers, employers, societies and government to be involved in ensuring a safe and conducive working environment at the work place against risks to safety or health arising out of the activities of persons at work. The Occupational Safety and Health Management as a Module in KUKUM is introduced to fulfill both the academic prerequisite and support the national agenda as endeavor by Act.

This paper will thrash out the experience of KUKUM on the aspect of learning and teaching on the topic of Occupational Safety and Health Management Module. This discussion will also look on the subject matter in total and will incorporate in it the syllabus, implementation and execution phase, assessment, examination questions and other related issues. It is hope through this working paper; KUKUM will be able to share its knowledge with other institution of higher learning in order to improve the quality and effectiveness of this course in the future.

Introduction

The Occupational Safety and Health Act (OSHA) 1994 or Act 514 was gazetted on 25 February 1994. This bring tremendous change in the development of occupational and safety. The Act requires the workers, employers, societies and government to be involved in ensuring a safe and

conducive working environment at the work place against risks to safety or health arising out of the activities of persons at work. The Act as affirmed in Section 4, Occupational Safety and Health Act 1994 endeavor: ¹

- a. To secure the safety, health and welfare of persons at work against risks to safety or health arising out of activities of persons at work;
- b. To protect persons at a place of work other than persons at work against risks to safety or health arising out of the activities of persons at work;
- c. To promote an occupational environment for persons at work which is adapted to their physiological and psychological needs;
- d. To provide the means whereby the associated occupational safety and health legislations may be progressively replaced by a system of regulations and approved industry codes of practice operating in combination with the provisions of this Act designed to maintain or improve the standards of safety and health.

This Act applies throughout Malaysia to the industries specified below: ²

- a. Manufacturing.
- b. Mining and Quarrying.
- c. Construction
- d. Agriculture, Forestry and Fishing
- e. Utilities – Electricity; Gas; Water; and Sanitary Services
- f. Transport, Storage and Communications
- g. Hotels and Restaurants
- h. Finance, Insurance, Real Estate and Business Services
- i. Public Services and Statutory Authorities including Universities

¹ Section 4 Occupational Safety and Health Act and Regulations 1994

² Section 1 (2) Occupational Safety and Health Act and Regulations 1994

This Act does not apply to work on board ships governed by the Merchant Shipping Ordinance 1952, the Merchant Shipping Ordinance 1960 of Sabah or Sarawak or the armed forces.³

The honorable Rector and Deputy Rector (Academic) recognize the magnitude of Occupational Safety and Health, thus offered the subject to be taught in KUKUM. Occupational Safety and Health Management as a Module in KUKUM expects to fulfill both the academic prerequisite and support the national agenda as endeavor by the Act. This is the spirit and philosophy for the Occupational Safety and Health Management module.

Consequently, it is hopeful that this subject will be able to aid the students whom are future practitioners of Occupational Safety and Health at the work place towards improving knowledge on the aspect of the management of occupational safety and health. Thus the task of lectures is to ensure the spirit and philosophy is achieved.

Hence, this paper seeks to look into its implementation and to respond to the issue of whether the objectives meet the academic requirement and on the other hand whether the national objectives are achieved.

Objectives, Syllabus and Methodology

KUKUM offered the course on Occupational Safety and Health Management as an “Option” paper with two credit hours. The course is being carried out by Centre of Communication & Entrepreneurship Skill (Pusat Kemahiran, Komunikasi dan Keusahawanan) or a.k.a. PKKK. The paper is offered to any students who are interested in the subject. The student can be from any engineering school (Computer & Communication Engineering, Electrical System Engineering, Material Engineering, Manufacturing Engineering,

³ Section 1(3) Occupational Safety and Health Act and Regulations 1994.

Mechatronic Engineering, and Microelectronic Engineering) regardless of year of study. The objectives of the course:

- a. Capable to set up the OSH system and procedures for the organization.
- b. Proficient to implement and monitor OSH programme successfully.
- c. Be responsive of universal safety and health requirement and take the essential preventive measures to avoid injuries and diseases.

Hence, the Occupation Safety and Health Management Modules focus on four focal areas i.e.:

- a. Part 1 - Managing Occupational Safety and Health (6 hours is allocated)
- b. Part 2 - Related Occupational Safety and Health Legislations and Regulations, Safety and Health Standards (8 hours is allocated)
- c. Part 3 - Occupational Health (6 hours is allocated)
- d. Part 4 - Occupational Safety (8 hours is allocated)

A total of 28 hours is allocated for the Learning and Teaching of Occupational Safety and Health Management Modules in KUKUM. The syllabus of the Occupational Safety and Health Management Modules is at Appendix 1.

Implementation Method

Lectures

In KUKUM, teaching of the Occupational Safety and Health Management Modules is through lectures. Lectures are schedule for two hours per week for 14 weeks per semester. Thus the contact hours are 28 hours per semester. As for the participants, it is limited to 40 students only. The participants will consist

of any students who are interested in the subject. The students can be from any engineering school regardless of year of study.

Assessment

The assessment for this course is based on two criteria that is through:

- a. Examination – 50% (final examination)
- b. Course Work – 50% (this includes Quizzes, Assignment, Participation).

Subsequently, below is the summing up of the assessment for the above criteria:

Assessment	Percentage (%)	Assessor
Examination – final semester	50	Lecturer
Course Work		Lecturer
a. Quiz	20	
b. Assignment	20	
c. Discussions and Participation in seminars, visit etc	10	
Total	100	

Examination questions

Examination questions consist of two parts. In Part 1 is the short answer question or subjective in nature and Part 2 is descriptive. In Part 2, students are required to choose from a range of questions. Students are required to answer 2 questions. The percentage for Part 1 is 60 % while Part 2 is 40% which brings to a total of 100%.

The process of preparing examination questions is no easy task. Examination questions must attain a certain standard. The lecturer prepares the examination questions and later goes through a vetting process. At least 3 other

lecturers or evaluator will vet the questions. The Dean will pen down his approval or disapproval of the examination questions after the vetting process. The questions are sent to the Examination Department for additional scrutinizing and printing before it emerges in the examination hall.

KUKUM recently organized a workshop on formulating examination questions and marking scheme. This workshop is aimed at increasing the skills in formulating and marking examination questions. The participants of this workshop are lecturers, “guru bahasa” or language teachers, and “Jurutera Pengajar” or Teaching Engineers.

Grading

The prospect of achievement of the student is based on the grading they achieve. Determining the grading of student is the most crucial and critical moment for lectures. Students grade are determined by the assessment percentage mentioned earlier. The next stage, the lecturer must key in the result in the “Sistem Maklumat Pelajar Universiti” which is a part of KUKUM’s Portal System. In this respect the lecturer must key in the results of the course work and the final examination marks in the system.

Students who achieve grade “C” and above and has fulfilled the requirement of each component (course work and examination) is considered as “pass” the paper. For those who has not fulfilled the criterion is automatically consider as “failed” the paper. Those who fail must repeat the paper in the next semester or when the paper is offered.

Other related issues

The class size for this module is small (maximum of 40 students) and two lecturers have been assigned to this course. Thus, being the case, KUKUM do not come across any grave problem regarding this paper. Additionally, the lecturers are not lumbered with problems due to having a small group of student.

Towards a more effective grasp of the subject, a one hour “class tutorials” per week is recommended. The number of student for each group can range from one to fifteen students. Throughout tutorials, student can discuss their assignment base on the last lecture topics or other topics which is listed at Appendix 1.

The learning and teaching of “Occupational Safety and Health” is on a good footing. However, this does not signify that the paper has no problems. At hand there are a number of predicaments related with this course such as “perception of students to this new paper, lack of reading resources in Bahasa Malaysia and also the call for appraisal of the module towards competency level”.

Students who register for this course to a large extend feel that they have benefited significantly. They feel that more students should be encouraged to enroll for this course. This is evidence through their written expression in their course assignment.

However, on the dark side, there are other students who register for this course who are indifferent or uninterested which is verified. At the commencement of the semester, during registration of subject for Academic Session 2005/2006, some forty students registered for the Occupational Safety and Health course. However, halfway through the semester, a total of 6 students or 15% of the student drop this course due to reasons only known to them. Often students refer to heavy work load on other core courses or clashes of classes with other core subjects as the main reason for dropping the subjects. Since this course is an “option” paper, these students perceive this course as a “second class” course or simply irrelevant to their degree programme.

Another the foremost problem faced is the lack of reading resources in “Bahasa Malaysia” on this topic. At hand the reading material in “Bahasa Malaysia which is being utilized as a reference is “Keselamatan dan Kesihatan

Pekerjaan Dalam Organisasi, by Mohamad Khan Jamal Khan, Nor Azimah Chew Abdullah, Ab. Aziz, Prentice Hall, and Pearson Malaysia Sdn. Bhd. Cetakan Pertama 2005.” This predicament will be overcome once English is used as a medium in lectures in the future.

There is also this feeling among students that the call for appraisal of the module towards competency level. They feel that additional topics should be introduced so that it is aligned with the modules of the Safety and Health Officer Certification Course. No doubt the suggestion is a noble one but the objective of this course must be analyzed in order to answer the query as suggested by some quarters. Looking at the objective of the course as stipulated earlier, hence it is concluded that the present arrangement should continue. On the contrary, students can pursue on their own when they graduate the Safety and Health Officer Certification Course or may even advance further for the Masters Program in Occupational Safety and Health offered by a few organization and institutions of higher learning.

Supporting facilities in KUKUM

KUKUM do not have problems on reading resources in English. There is an array of books in the library on “Occupational Safety and Health” which are all in English. Further to this, to assist lecturers on any topic, at hand in the Library is an array of compact discs on Occupational Safety and Health. The topics which are available in the library is at Appendix 2.

Conclusion

As a concluding note, we believe that the objectives set by KUKUM as regard to this module is achieved. On the same note, we believe that the national objectives are also achieved.

However on the questions of “perception of students, lack or reading resources in Bahasa Malaysia and the call for appraisal of the module towards competency level”, we believe we can share ideas with seminar participants as the route of action to be taken. Furthermore, comments, opinions, ideas and inputs are most welcome from all participants.

REFERENCE:

1. Occupational Safety and Health for Technologists, Engineers, and Managers, Fifth Edition, David L, Goetsch, Pearson Prentice Hall, 2005.
2. Keselamatan dan Kesihatan Pekerjaan Dalam Organisasi, Mohamad Khan, Nor Azimah Chew Abdullah & Ab. Aziz Yusof, Pearson Prentice Hall, 2005
3. Occupational Safety and Health Management: A Practical Approach, Charles D. Reese, David L, Lewis Publishers, 2003.
4. Akta Keselamatan dan Kesihatan Pekerjaan 1994
5. Akta Kilang dan Jentera 1967
6. Akta Kualiti Alam Sekeliling 1974

OCCUPATIONAL SAFETY AND HEALTH MANAGEMENT MODULE
EUW 345

MODULE	TOPICS	HOURS
1 1.1 1.2 1.3 1.4 1.5	MANAGING OCCUPATIONAL SAFETY AND HEALTH Objectives., Organization, Mission and Vision Management Policy and organization. Documentation, reference materials, procedures, action plan Hazard identifications, Risk Assessments and Control Accident investigation and reporting	6
2 2.1 2.2 2.3 2.4 2.5	OCCUPATIONAL SAFETY AND HEALTH LEGISLATION AND RELATED SERIES OF STANDARD Occupational Safety and Health Act 1994 (Act 514) Factories and Machinery Act 1967. Environmental Quality Act 1974 (Act 127) & Legislation ISO 14000 (Evironmental Safety & ISO 14000) OHSAS 18000 (Occupational Health and Safety Management System)	8
3 3.1 3.2 3.3 3.4	OCCUPATIONAL HEALTH Ergonomic at work place Building Operations and Works of Engineering Construction Occupational Medicine and Occupational Diseases. Management of stress.	6
4 4.1 4.2 4.3 4.4 4.5 4.6 4.7	OCCUPATIONAL SAFETY Risk Assessment at the work place. Personal Protective Equipment Electrical Hazards. Hazardous Chemicals: MSDS/CSDS Classification, Packaging and Labeling of Hazardous Chemicals. Fire Hazards and Safety. Emergency & Disasters Management	8
TOTAL HOURS		28

REFERENCE:

1. Occupational Safety and Health for Technologists, Engineers, and Managers, Fifth Edition, David L, Goetsch, Pearson Prentice Hall, 2005.
2. Keselamatan dan Kesihatan Pekerjaan Dalam Organisasi, Mohamad Khan, Nor Azimah Chew Abdullah & Ab. Aziz Yusof, Pearson Prentice Hall, 2005
3. Occupational Safety and Health Management: A Practical Approach, Charles D. Reese, David L, Lewis Publishers, 2003.
4. Akta Keselamatan dan Kesihatan Pekerjaan 1994
5. Akta Kilang dan Jentera 1967
6. Akta Kualiti Alam Sekeliling 1974

SUPPORTING FACILITIES ON COMPACT DISC AVAILABLE
IN KUKUM'S LIBRARY

NO	TOPICS	REMARKS
1	Accident investigation	
2	Blood borne Pathogens	
3	Bomb threat strategy	
4	Building evacuation	
5	Confined space safety	
6	Dealing with chemical safety	
7	Drills & drilling safety	
8	Electrical & electronic safety	
9	Electrical safety in the workplace	
10	Equipment & machine guarding	
11	Ergonomics, the practical approach	
12	Falls in the workplace	
13	Foot safety	
14	Identifying fire hazards	
15	Job safety analysis	
16	Noise and hearing conservation	
17	Personal protective equipment	
18	Prevention of eye injuries	
19	Recognition, Evaluation & control of hazards	
20	Respiratory protection	
21	Safety awareness	
22	Safety in the office	
23	Slips, trips and falls	
24	Understanding hazards and risks	
25	Unsafe acts	
26	Welding safety	