

ASEAN諸国の大学等における安全衛生教育の実態調査及びミャンマー国を例とした  
安全衛生教育カリキュラムの開発と試行に関する研究

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研究要旨：ミャンマーの工科系大学32大学で利用できる労働安全衛生教育用の教科書を作成し出版した。作成に当たり、2018年及び2019年にミャンマーのモービー工科大学及びヤンゴン海事大学において実施したセミナーの結果を基に、ミャンマーの大学で使いやすいように内容を30分の講義を8回分に分割し且つ内容をモービー工科大学の担当者に確認して、教科書を完成させた。また、フィリピンを除くASEAN諸国の大学における安全衛生教育に関する報告書を完成させた。

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労働安全衛生教育用のテキストを基に、教科書を作成し2022年3月に出版した。教科書に使用した、イラストは、研究協力者の岡山大学川上真以氏が作成した。内容の監修は田中寿郎教授、英文作成及び校閲はルース教授が担当した。

## A. 研究目的

1. 2018年度および2019年度に作成した労働安全衛生教育用のテキストをミャンマーの実情に合わせて改善し、英文のテキストを完成させ出版する。さらに、このテキストを活用するために、ミャンマーの全32工科大学の担当教員にモービー工科大学に集め、このテキストを活用した教育法について、セミナーを行う。
2. フィリピン大学の安全衛生管理及び教育について、調査を行い、ASEAN地域の大学における安全衛生教育の調査結果をまとめる。
3. 本プロジェクトの成果を高等教育機関における安全衛生教育の国際会議（The Asian Conference on Safety & Education in Laboratory 2020）で発表し成果を広める。

2. フィリピンの大学の安全衛生教育に関する調査は、訪問調査およびWeb調査ともに、実施を試みたが、実施できなかった。そこで、研究協力者の宮崎隆文氏及びジンチェンコ寧氏にフィリピン以外の大学について、取りまとめていただいた。
3. 本プロジェクトの成果については、国際会議（ACSEL2020、2020年12月Web開催）及び、2022年3月に開催されたRESE研究会にて発表を行った。

## B. 研究結果

新型コロナウイルス感染症の拡大に伴い、海外への渡航や国内移動が困難になった上に、ミャンマーの軍事政権によるクーデターため、計画した海外での活動は実施できなかった。そのため、安全衛生教育のための教科書作りに注力した。

1. 2018年および2019年にミャンマーの大学でセミナーを行い、2019年に原案を作成した

## C. 研究発表

1. 論文発表 なし
2. 学会発表

・ What topics should be taught as the first step in safety education in technological universities? T. Tanaka\*, K. T. Lwin, K. Ito, S. Okano, R. Vergin, M. Kawakami and T. Miyazaki, ACSEL2020 (Web Conference), 2020/12.

・ 工学系大学向け「労働安全衛生」カリキュラム及び教科書作成の試み、伊藤和貴、ルースバージン、岡野聡、宮崎隆文、田中寿郎 REHSE第11回研究会 2022/3 東京大学

## D. 知的財産権の出願・登録状況なし

## What topics should be taught as the first step in safety education in technological universities?

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### Abstract

We launched a project in 2015 for the purpose of developing an introductory course on occupational safety and health for technological universities in Myanmar. Normally, such a course is based on the occupational safety and health laws of each country. However, if such laws are not in place, on what do we base the content? We held several seminars and had many discussions with the OSH education faculty in several technological universities in Myanmar. After much trial and error, we have succeeded in creating a course and a textbook. We will present the results of our project.  
 Keywords: textbook, introductory course, OSH

### 1. Introduction

The technological universities in Myanmar have been required to include instruction on occupational safety and health in their curriculum. Technological University Hmawbi, Ehime University and Okayama University are collaborating to develop an OSH syllabus and a textbook for all technological universities in Myanmar.

A comprehensive Occupational Safety and Health Law was proposed for approval in Myanmar in 2015. An education program tailored to their technological universities is an important step in creating a "safety and health culture" in Myanmar. The program consists of 8 sessions. Each session is only 30 minutes. Our challenge was to determine what topics to include within that limited time frame. The field of OSH covers a very wide range of understanding of natural and social sciences, as well as technological and psychological knowledge. It is impossible to teach all of them in such a short time. How could we select the content that would meet their purpose? This report presents our results after many trials and errors.

### 2. Procedure of topic selection

The most important point for importing and adapting a new concept to a society from another society is a mutual understanding between the two societies. Before starting to edit the textbook, we spent three or four years reaching a mutual understanding. During this period, we held two kind of events to build mutual understanding on the OSH listed below.

2. We have also held OSH seminars in three technologica 1. We invited a rector and two safety officer trainees of two of the Technological Universities in Myanmar to Ehime University to learn about the OSH in Ehime University. This helped them to understand the importance of OSH in universities, not only for the teaching staff but also for students. As a results two universities set up new organizational management scheme modeled after the one used in Ehime university.

1 universities in Myanmar several times. Every time, after the seminar, we met with the teaching staff, safety officers and the rectors to discuss what kind of safety knowledge is needed in Myanmar and what OSH topics they want to teach to the students. These events have helped us gain a mutual

understanding of OSH. Based on this understanding, we started to write the textbook.

Both sides decided on a flipped-classroom style: reading the text outside of class and doing group work/discussion during the class. The content was decided after 2 or 3 trial seminars in Myanmar.



Discussion with faculty members

### 3. Contents of Proposed Lecture

An example of the contents of a standard occupational safety and health textbook is follows:

1. Introduction to Occupational Safety and Health
2. Safety Legislation
3. Workers' Compensation and Recordkeeping
4. Safety-Related Business Laws
5. Accident Causation and Investigation: Theory and Application
6. Introduction to Industrial Hygiene
7. Ergonomics and Safety Management
8. Fire Prevention and Protection
- .....
- .....
19. required Written Program

As seen in the above list, the content is based on OSH law and regulations, and the topics are spread over a wide field. It takes a long time to cover them all.

After our seminars and long discussions with our colleagues in Myanmar, we selected the topics listed below:

- Chapter 1. Introduction to OSH
- Chapter 2. OSH Management
- Chapter 3. Risk Assessment
- Chapter 4. Incident/Accident Reporting
- Chapter 5. Inspections
- Chapter 6. Accident Analysis
- Chapter 7. Good Practice
- Chapter 8. Review and final exam

With our Myanmar colleagues, we decided to use a flipped-classroom approach with group work for greater impact and to get students to think for themselves.



Cover of our OSH Textbook

### 4. Conclusion and Future plan

- (1) Developing an occupational safety health textbook for all Technological Universities in Myanmar for a 0.5 credit class.
- (2) To achieve that purpose, faculty members were invited to Ehime University to observe our OSH system. That became the basis of a new organizational management scheme in their universities.
- (3) After the Covid-19 pandemic, we will plan to visit Myanmar to introduce this method of teaching occupational safety and health education to all technological universities in Myanmar.

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# Occupational Safety and Health

An Introduction to  
Building a Safety Culture

**Editors**

Toshiro Tanaka  
Ruth Vergin



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