

**Skills Evaluation System Promotion Program**  
**Project Implementation Report**  
**【Kingdom of Cambodia】**

- ◆ December 11 ~ 15, 2018
- ◆ Phnom Penh City, Kingdom of Cambodia  
National Polytechnic Institute of Cambodia (NPIC)
- ◆ Turning 3rd Grade

December 2018

## 1. Outlines of project

Implementation period:	December 11 (Tue) ~15 (Sat), 2018
Venue:	Phnom Penh City, Kingdom of Cambodia National Polytechnic Institute of Cambodia (NPIC)
Job trades:	Turning 3rd Grade
Lectures / Workshops:	Vocational Training Method
Experts:	Mr. Fumio Inagawa (Technical Advisor, SESPP Secretariat)
Participants:	7 people

### Implementation schedule

Date	Contents
December 11 (Tue) 08:30AM~04:00PM	<b>【Vocational Training Method (VTM)】</b> Opening ceremony 1) Importance of a standard work sheet 2) Composition of a standard work sheet 3) How to make a standard work sheet
December 12 (Wed) 08:30AM~04:00PM	<b>【Vocational Training Method (VTM)】</b> 1) Making a standard work sheet
December 13 (Thu) 08:30AM~04:00PM	<b>【Vocational Training Method (VTM)】</b> 1) Making a standard work sheet (Continuation) 2) Processing based on the standard work sheet which they made 3) Checking processing procedure, cutting condition and working time 4) Modify a standard work sheet based on the processing result
December 14 (Fri) 08:30AM~04:00PM	<b>【Vocational Training Method (VTM)】</b> 1) Processing based on the standard work sheet which they made and modified 2) Checking processing procedure, cutting condition and working time
December 15 (Sat) 08:30AM~04:00PM	<b>【Vocational Training Method (VTM)】</b> 1) Modify a standard work sheet based on the processing result 2) Review cutting condition, relation between feed and surface roughness, appropriate protrusion length of a turning tool etc. 3) Summary

## 2. Review of the course

With Vocational Training Method seminar, we give guidance in regards to how to create a standard manual subjected practical assignment of Turning 3rd grade on skills testing and how to proceed with a practical training using the standard manual. We aim that improvement of the teaching abilities of the participants by providing them with the capability in regards to effective way of proceeding with the training through this seminar.

- In Cambodia, there is no concept of instructing trainees by using standard manuals with ingenuity consisting of processing step, process chart, cutting condition and key points. Therefore, it was the first experience for the participants to create the standard manual. Also, verification of the cutting conditions according to created standard manual was the first time and it seems that it was very useful for them. (see the results of questionnaire)
- We heard several comments from the participants that they were able to smoothly proceed with the works with an appropriate processing conditions because the works according to the standard manual is easy to understand. It is easy to understand for the trainees as well if the instruction of the practical work is given by using the standard manual showing the process chart by each processing step with the description of processing conditions and the key points. Also it allows the trainees to think of how to find the cutting condition. We were able to confirm the effectiveness and usefulness of the standard manual by the comments from them above
- Several participants made the comments that it is very useful way in verifying the processing step and the cutting condition by the standard manual and figuring out an appropriate processing step and cutting condition to prevent wear and chipping of the cutting tools, chattering and tears on the finishing surface.  
At the training site in Cambodia, the trainings using carbide cutting tool is lesser than the ones using high speed steel cutting tools and the latter is common. Therefore, it can be said that carrying out a training program summarized that covers from the basic contents to the application content of carbide cutting tools such as how to use carbide cutting tools and its cutting processing skills is very useful way to build the instructor's processing skills.
- What I felt through this Vocational Training Method seminar is that most of the students do not have fundamental skills enough in regards to the turning processing. In order to improve the skills of the vocational training instructors in Cambodia, it is important to analyze their existing abilities and provide the guidance from a long-term perspective. It is difficult to teach knowledge and practical skills systematically in a short term guidance provided by experts.  
It is expected to develop and implement a systematic training program for instructors in the way that was done in Japan in the past, and also organizing the system that a lot of instructors can participate in that training program. In order to make it happen, it is essential that providing the guidance by experts in a long term.

### 3. Results of questionnaire

Participants 7 people (Respondents : 7 people)

Satisfaction level: very satisfied=7

Effectiveness level: very effective=5      effective=2

Desire for continuation level: strongly wish=3      wish=2      neither=2

Requests / Improvement Points

- The workshop was perfect and all of the contents were excellent.
- Cambodian government needs to involve more.
- I would like students in Cambodia participate in machining skills competition in the region and overseas.
- I wish learn turning processing skills more. (6)
- I request you to take place practical skills training on 2<sup>nd</sup> grade.
- I ask that Japan please support students in Cambodia to participate in machining skills training.

Preferred job trades to implement in the future

- Milling (7)
- Machine Assembly (Machine Finishing ) (5)
- Molding (5)
- Welding (2)

\* The number in brackets () is number of respondents.