



# Course on 'Helping Students Become Competent in HOTS (KBAT) through Mathematics Teaching and Learning'

*Facilitator:*

**Dr Yeap Ban Har**

Principal

Marshall Cavendish Institute, Singapore

*Target Participants:*

Primary Mathematics Teachers  
and Teacher Educators

*Date:*

23 - 24 January 2017

*Venue:*

SEAMEO RECSAM, Penang, Malaysia

*Organised by*

Southeast Asian Ministers of Education Organization  
Regional Centre for Education in Science and Mathematics  
Jalan Sultan Azlan Shah, 11700 Gelugor, Penang, Malaysia

[www.recsam.edu.my](http://www.recsam.edu.my)

## Rationale

Since the release of the recent TMSS and PISA results, the education stakeholders and Malaysian teachers at large were very much shaken by our dismal performance. Since then, much effort had been done to create an awareness of our mathematics achievement standing globally. Workshops and training had been carried out in massive scale to re-train teachers on how to inject Higher Order Thinking Skills (HOTS or known as *KBAT in Malay*) in teaching and learning. However, the efforts are not smooth sailing. As an effort to move mathematics teachers forward, this course is proposed to look at the competencies that the teachers need to focus on and some features of a mathematics lesson that allow HOTS (*KBAT*) to happen.

## About the Course

How do we help students become competent in HOTS (*KBAT*)? How do we get students to perform at a high level in mathematics? This course looks at the five competencies that the teachers need to focus on and the five features of a mathematics lesson that allow to happen through examples based on topics included in the Malaysian mathematics syllabus. The emphasis on HOTS (*KBAT*) in Malaysia is timely, given the demands of the technological and global world that our students are in. How do we prepare them for a curriculum that demands HOTS (*KBAT*) and how do we assess them accurately in HOTS (*KBAT*)? These questions and some other questions will be discussed in this hands-on course.

## Objectives

At the end of the course, participants will be able to:

- identify the competencies fundamental in the development of HOTS (*KBAT*);
- identify five features of a mathematics lesson that allow HOTS (*KBAT*) to happen;
- prepare themselves for a curriculum that focuses on HOTS (*KBAT*); and
- assess the students accurately in HOTS (*KBAT*).

# Methodologies

This is a hands-on course. Participants will work individually or in groups. Based on teacher-as-a-learner model, each session is based on the instructor modeling one or more lesson segment for participants to experience, reflect and be guided to construct professional knowledge on the topic. The goal of the activities is to shift mindset about mathematics, mathematics learning and students as mathematics learners.

<b>Programme Schedule</b>	
<b>Time</b>	<b>Activity</b>
<b>Day 1 (23 January 2017, Monday)</b>	
0800 – 0830	Registration
0830 – 1030	<ul style="list-style-type: none"> <li>• Overview on Students Achievement</li> <li>• Rationale for HOTS (KBAT) in Mathematics</li> <li>• Case Study on Whole Number Addition</li> </ul>
<b>1030 – 1100</b>	<b>Group Photo &amp; MORNING TEA</b>
1100 – 1300	<ul style="list-style-type: none"> <li>• Case Study on Long Division</li> <li>• Examination Items based on HOTS (KBAT)</li> </ul>
<b>1300 – 1430</b>	<b>LUNCH</b>
1430 – 1630	<ul style="list-style-type: none"> <li>• Case Study on Multiplication</li> <li>• Developing HOTS (KBAT) through Drill-and-Practice Lessons</li> </ul>
<b>1630</b>	<b>AFTERNOON TEA</b>
<b>Day 2 (24 January 2017, Tuesday)</b>	
0830 – 1030	<ul style="list-style-type: none"> <li>• Reflecting on Day 1</li> <li>• Case Study on Whole Number Subtraction</li> </ul>
<b>1030 – 1100</b>	<b>MORNING TEA</b>
1100 – 1300	<ul style="list-style-type: none"> <li>• Case Study on Fraction</li> <li>• Ways to Assess HOTS (KBAT)</li> </ul>
<b>1300 – 1430</b>	<b>LUNCH</b>
1430 – 1600	<ul style="list-style-type: none"> <li>• Summary of Five Lesson Features</li> <li>• Summary of Five Core Competencies for HOTS (KBAT)</li> </ul>
1600 – 1630	Q & A session Closing & Certificate Presentation Ceremony
<b>1630</b>	<b>AFTERNOON TEA</b>

*Note: This programme schedule may be subjected to changes without prior notice*

## Course Facilitator

Dr Yeap Ban Har taught at National Institute of Education, Nanyang Technological University in Singapore for more than ten years until 2010. Presently, he holds two concurrent positions, as the director of curriculum and professional development at Pathlight School, an autism-oriented primary and secondary school in Singapore, and the principal of Marshall Cavendish Institute, a global teacher professional development institute. He is also the consultant to a major textbook series used in Singapore schools and author of a kindergarten programme used internationally. Ban Har makes presentations at various international conferences and teaches mathematics education courses around the world. This academic year, he



taught an undergraduate course at SIM University in Singapore in an adjunct position. He was also a visiting professor at various universities in recent months including at The Chinese University of Hong Kong, Seoul National University, several Thai universities including Chiangmai University, Kasetsart University and Srinakharinwirot University, and University of Curacao. In the last year, he has taught similar courses to inservice teachers in USA, England, South Korea, Norway, Sweden, Spain, and various countries in Southeast Asia including Singapore.

### Participation Fees

Type 1: **RM 380.00 per participant** (Without Accommodation)

Type 2: **RM 510.00 per participant** (Twin Sharing at RECSAM International House)

Type 3: **RM 670.00 per participant** (Single Occupancy at RECSAM International House)

### Accommodation at RECSAM International House

Check-in : A day before, 2.00 p.m. onwards

Check-out : A day after, by 12.00 p.m.

### Food

Morning tea, lunch and afternoon tea will be provided by the Centre during the course. For stay-in participants (Type 2 & Type 3), breakfast and dinner will be provided too.

### For Enquiries:

Ms Noraini Daud / [noraini\\_daud@recsam.edu.my](mailto:noraini_daud@recsam.edu.my) / 04-6522741

Ms Bhavani Ramasamy / [bhavani@recsam.edu.my](mailto:bhavani@recsam.edu.my) / 04-6522752

Ms Teh Kim Hong / [tekh@recsam.edu.my](mailto:tekh@recsam.edu.my) / 04-6522746



## Participation Form

Name: \_\_\_\_\_

School / Organisation: \_\_\_\_\_

Gender: Male / Female

Meals: Vegetarian / Non-vegetarian

Mobile: \_\_\_\_\_ Email: \_\_\_\_\_

***(Please tick the following)***

**I have checked with the secretariat to confirm the availability of place.**

Do you need accommodation at RECSAM International House?

Yes    Type 2    Type 3   Date of check in: \_\_\_\_\_

No   Date of check out: \_\_\_\_\_

I enclose a Cheque / Local Order / Postal Order No: \_\_\_\_\_ bearing the sum of RM \_\_\_\_\_ as payment for the course.

(Please make cheque/local order/postal order payable to: **SEAMEO RECSAM**)

Note: To enroll please complete the PARTICIPATION FORM and send/fax it to:

**Director, SEAMEO RECSAM, Jalan Sultan Azlan Shah, 11700 Gelugor, Penang.**

Fax: 04-6522737

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

### Submission and Closing Date

Places are limited to a **maximum of 50 participants** and will be given on a first come, first served basis. Please write to us or call us to check for availability before registering and making payment. All participation forms are to be submitted latest by **16 January 2017**.

### Local Order Information:

Pay to: SEAMEO RECSAM

Bank: MAYBANK GELUGOR BRANCH, PENANG

Account Number: 5571 5700 0647

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