Webinar Series on
Introduction to the Basic Computational Thinking Skills for Primary Mathematics Teachers

Date:
9 & 21 September 2021

Facilitators:
Dr. Wan Noor Adzmin & Dr. Warabhorn Preechaporn
Training Programme Division, SEAMEO RECSAM

Target Participants:
Primary Mathematics Teachers

Mode: Online

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

Computational Thinking (CT) is the thought processes involved in formulating a problem and expressing its solution in a way that a computer—human or machine—can effectively carry out (Wing, 2006). It will be a fundamental skill used by everyone in the world by the middle of the 21st Century (Wing, 2012). It involves with defining, understanding, and solving problems, reasoning at multiple levels of abstraction, and analyzing the appropriateness of the abstractions made (Lee, et al., 2011). The four basic strategies of CT skills are decomposition, pattern recognition, algorithms and abstraction (McNicholl, 2018). These strategies are necessary for problem solving and help children develop better problem solving skills.

CT skills incorporated with technology can be made possible by using Scratch that developed by the MIT Media Lab. It is a block-based visual programming language which helps children learn to think creatively, reason systematically, and work collaboratively (scratch.mit.edu).

This webinar is designed to equip participants for mathematics problems solving hands-on approach through games, puzzles, and magic tricks. Nevertheless, they also obtain practical programming skills and coding using "Scratch" to design and create mathematics teaching materials such as: interactive activities, games or animations.

Objectives

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

- acquire the knowledge of four basic strategies of CT for mathematics problems solving, and
- acquire the knowledge of Scratch and its application to design and create mathematics teaching materials.

Webinar Programme

Date	Activity
7-8 Sep 2021	Registration
Day 1 (9 Sep 2021, Thursday)	
3.00 – 3.10 pm	Welcome Message *by Dr. Wan Noor Adzmin, Deputy Director, Training Programme Division, SEAMEO RECSAM.*
3.10 – 4.00 pm	Introduction to Computational thinking: What, Why and How? *by Dr. Wan Noor Adzmin.*
4.00 – 5.00 pm	CT skills for mathematics problems solving *by Dr. Warabhorn Preechaporn.*
5.00 pm	**Group Photo**
Day 2 (21 Sep 2021, Tuesday)	
3.00 – 5.00 pm	• Computational thinking for Scratch; • Introduction to "Scratch" and exploring its tools; • Assigning tasks for mathematics teaching materials; and • Survey questions *by Dr. Warabhorn Preechaporn.*

Facilitators

Dr. Wan Noor Adzmin, currently is the Deputy Director of Training Programme Division at SEAMEO RECSAM, Penang, Malaysia. She holds a doctorate degree in Instructional Leadership from University of Malaya, masters degree in management and B. Sc. (Hons.) in mathematics. She has 29 years of experience in the teaching profession as a mathematics educator (16 years in secondary school and 13 years in the Institute of Teacher Education Malaysia). Her expertise and interest includes Mathematics education, multigrade classroom teaching and learning, Mathematical Reasoning, Instructional Leadership and Qualitative Research.

Dr. Warabhorn Preechaporn is a Mathematics Education Specialist in Training Programme Division at SEAMEO RECSAM, Penang, Malaysia. She holds a doctorate degree in computational science from Walailak University, Thailand. She has 26 years of teaching experience as a mathematics teacher in Nakhon Si Thammarat, Southern Thailand. In SEAMEO RECSAM, she has facilitated and supervised training courses for educators from the SEAMEO member countries, countries from the African continent and the Colombo Plan countries. She has chaired and presented papers at international conferences. Her interests are in dynamic mathematics software such as GeoGebra, Scratch and Computational thinking with Scratch to create interactive activities, Problem-Based learning the 4 Core Areas (PBL4C), and Mathematical Explorations through Paper Folding and the 3-D straw models.

Registration (link available ONLY on 7-8 Sep 2021)
shorturl.at/hlwPW

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