

Announcement of the online program for SEAMEO School Network (free of charge)  
Second Online Program by CRICED, University of Tsukuba, Japan

Title:

**Mathematics Education to Develop Students Agency: The Case of Fractions**

“Teaching Mathematics to Develop Mathematical Thinking as Higher Order Thinking: How do you teach? Why?” II

Provided by

CRICED, University of Tsukuba, Japan: Affiliate Member of SEAMEO

Lectured by

Masami Isoda, Prof/PhD, University of Tsukuba, Japan

With support and contribution of

Ethel Agnes Pascua Valenzuela, Wahyudi & Weerawan Theeraroungchaisri (SEAMEO Secretariat), Shah Jahan bin Assanarkutty & Teh Kim Hong (SEAMEO-RECSAM), Wahid Yudianto (SEAMEO QITEP in Mathematics), Maitree Inprasitha, Narumon Changsri, Nisakorn Boonsena & Auijit Pattanajak (Khon Kaen University, Thailand), Nguyen Chi Thanh (Vietnam National University-University of Education, Hanoi, Vietnam), Aida Yap & Erlina Ronda (University of the Philippines, Philippines), Raimundo Olfos & Soledad Estrella (Pontificia Universidad Católica de Valparaíso, Chile), Marcela Santillan (Universidad Pedagógica Nacional, Mexico)

**Course Summary**

On OECD Education for 2030 (2018), Student Agency means students who “Learned how to learn”. The objective of this on-line lecture is the education of teachers’ profession to develop students who learn mathematics for and by themselves with learning terminology of mathematical thinking. It is necessary mathematics’ knowledge to develop the student agency for all school levels. Based on a survey on the last program (Figure 1), it mainly focuses on the topic of fractions at elementary school level. As well as the last program, it will be illustrated by using the task sequence of Japanese Problem Solving Approach which is provided by the Gakko Toshō Textbook because its adapted editions have been used in Thailand, Mexico, Papua New Guinea, Chile, and Indonesia.

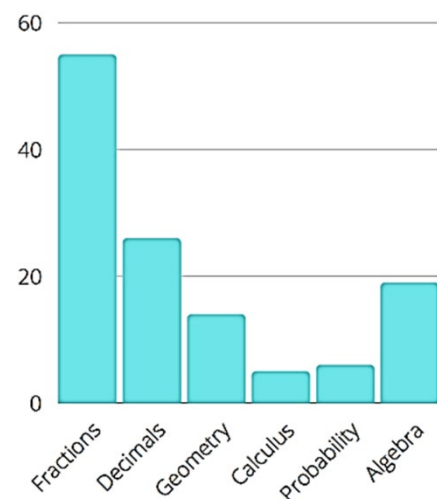


Fig. 1. Demands of the last participants

**Course Content, Registration and Certifications**

It is a free program on SEAMEO priority areas #5 for 'Revitalizing Teacher Education' and #7 for 'Adopting 21<sup>st</sup> Century Curriculum'. CRICED, University of Tsukuba, Japan, provides the certifications to participants depending on the completion of ordered stages.

This online lecture goes through flip learning style. Before the lecture, registered participants will receive the document for the lesson and prepare the answer for exercises. At each online lecture, we answer the exercise with discussion of contributors. At the end of each lesson we ask participants a short questionnaire for knowing how the lesson worked and send the URL for every class. Only the participants that answer the questionnaire will receive the next document and the URL for the next class. This feedback from participants is used for evaluation of the program itself. Also, it is used as attendance confirmation but not as an evaluation of the participants.

### Course Roadmap

Lesson	Content	Schedule
Lesson 1	What is fraction?	Oct. 23
Lesson 2	Dividing and Operational Fraction, and Quantity Fraction	Oct. 30
Lesson 3	Addition with different denominator	Nov. 6
Lesson 4	Fraction as Number	Nov. 13
Lesson 5	Fraction in relation to ratio and proportion	Nov. 20
Lesson 6	Multiplication of Fraction	Nov. 27
Lesson 7	Division of Fraction	Dec. 4

All the lessons will begin at 19:00 (Japan time) through a live streaming via YouTube. Each lesson will be approximately 75 minutes long, divided into several parts for taking small breaks. Participants will be able to attend each lesson until next lesson on the roadmap, sequentially.

**Application form (Deadline October 20th, 2021):** <https://forms.gle/aykxXRd4gYB3J7Fm9>

Every lesson uses the learned knowledge at the previous lesson. Sequential participations are necessary to receive the certification of the course at the end (after lesson 7) from CRICED.

### Contact

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Inquiry form for the course: <https://forms.gle/ZbT92GxAGE7UVAAHA>

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