

Asia-Pacific Economic Cooperation





## **APEC 2022**

## **Online Workshops for Lesson Study 2.0:**

Artificial Intelligence (AI) and Data Science for Education in APEC Economies

## Lesson Study: A SEAMEO Experience

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## Influence of APEC Lesson Study Project (2006-2018) on SEAMEO

- Keeping up with Trends
- Issues and Sustainability

## The Initial Lesson Study Movement in Malaysia

#### The Implementation of the APEC-Tsukuba Lesson Study Project in 2006 ...

Interest among local researchers and teachers



#### How do other SEAMEO Centres respond towards the APEC Lesson Study project?





## Science Lesson Study Project







#### 2011

- 5 primary & secondary schools
- Introduce LS process to science teachers
- a strategy for enhancing teacher professional development

Successful outcome: - improve pedagogical and professional development  Include LS as an improved pedagogy in conducting various courses since then

Lee, S. M (2020). Enhancing Teachers' Professional Development through Lesson Study: The Case of Penang Science Teachers

## More Sharing Experiences ...



#### **Other Lesson Study Development**

#### 2011

- Teacher Education Division in MOE officially adopted the LS programme
- Involved 289 primary and secondary low-performing schools
- Cascading model: 6 lesson study zone-level workshops



RECSAM's Continual Participation In APEC Lesson Study Project

- **Consolidated** further the related knowledge and skills in LS
- Making adjustments and improvements to course content (FY2010 onwards)
- Aligning course content to the latest trend in mathematics/science education

#### Improved & new content added to courses:

- Best practices in mathematics/science teaching and learning
- Process of Lesson Study
- LS as a strategy for enhancing teacher
   Professional development
- ✓ Professional Learning Community
- Mathematical thinking
- Mathematical Communication
- ✓ Assessment

## How to disseminate?

#### Disseminated through Training Courses /Programmes Offered

#### **Regular course (RC)**

 4 math & Science courses per year

02

In-service teachers from 11
 SEAMEO member countries.

#### **In-country Training**

Upon request –
 SEAMEO countries

#### **Customised courses/short course**

- Upon request
- TCTP (JICA/MTCP)-African teachers
- MTCP (Africa, ASEAN, Eastern Europe...)

01

SEAMEO

# 04

 Develop
 professional practices

 Catalyst for the advancement of science and math education

#### Colloquium

 Sharing from local/foreign specialists consultants

#### Workshop

05

- Best practices
- Hands-on practice
- Collaboration with local & foreign experts





Total Participation Between International and Malaysia Participants by Courses Conducted for Fiscal Year 2019 / 2020





Source: Extracted from Highlights of the RECSAM Annual Report for F. Y 2019/2020



#### **English edition of** Japanese Math Textbook for Elementary School (2nd edition) between **CRICED and RECSAM** (2011)

#### **Committee for English Translation**

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Numbers up to 1000

Let's plant rice seeds.

How many seeds are there?

How can we count the umber o



#### SEA-BES Common Core Regional Learning Standards for Mathematics & Science (2015-2017)

- Regional project
- SEAMEO Secretariat
- Curriculum experts of SEAMEO countries,
- Science & Math specialists, local & SEAMEO
- Prof Masami Isoda as a consultant(for Mathematics)
- Dr Mark Windale –Consultant for Science, Sheffield Hallam University
- APEC Math specialists & Japanese experts as reviewers,

4 SEAMEO Basic Education Standards (SEA-BES): Common Core Regional Learning Standards (CCRLS) in Mathematics and Science











#### Promoting the use of the CCRLS : In RECSAM

- Using the framework in math/science training courses
  - math process & thinking
  - mathematical values, attitude and habits of the mind
  - Study and compare curriculum
- **Develop math guidebooks for** teachers and teacher educators based on the standards

#### **Use of CCRLS-Mathematics /Science in other Centres**

- **OITEP** in Mathematics- MaRWA **Diagnostic Assessment project** (Maths)
- **KKU** use of the CCRLS framework (Huntula & Wongsuwan, 2022) in **Blended Learning Project**



**Collaboration project : CRICED, SEAMEO RECSAM, Khon** Kaen University, IPST Thailand & **QITEP in Mathematics** 

Mathematics Challenges

for Classroom Practices

Book 3

**Year 7-9** 

**For Secondary** 

### 6

#### **In-service Training Programme**

#### From 2015-2020

More improved Training courses, modified to include :

- Structure problem solving /Teaching Mathematics through problem solving
- Workshop on Lesson Study
- Mathematical thinking
- Proof and Reasoning



School try-out on how to teach Mathematics through Problem Solving (Students tried the problem individually)



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Yes I wout to change I my style of teaching Because I think this the method is so good Jos development of kicls.

State your views.





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2018 Regular Course

- Prof Isoda explained the framework of SEA-BES CCRLS-Mathematics
- How to develop mathematical thinking with Prof Isoda

(Participants from SEAMEO countries)





#### **Teaching through Problem Solving with African educators**

Solving a problem individually



Reflection session after school tryout





## **SEAMEO RECSAM is Unique**



## **Issues & Sustainability**

- Mathematics and Science specialists
  - short secondment tenure (2 to 3 years)
  - constraint in the continuity of programs
- Expertise to expand and extend LS related program
- Keeping abreast with trends in math and science education
- Upscaling expertise of specialists
- Engaging in quality teacher education research that informs and is applicable to best practices in classrooms that enhance student learning

The APEC lesson study project triggered the interest of RECSAM specialists to learn and do lesson study

## Conclusion

- Created awareness among specialists for making improvements to the content of Science and Mathematics training courses
- CRICED plays a vital role in supporting SEAMEO Centres, particularly RECSAM to be at the forefront of teacher professionalism in Science and Mathematics.

Thank You for your attention