Symposium on Lesson Study in Mathematics Symposium on Lesson Study in Mathematics

30 May 2008 National Institute of Education Nanyang Technological University SINGAPORE

Organized by Association of Mathematics Educators together with Curriculum, Teaching & Learning and Mathematics & Mathematics Education Academic Groups (NIE/NTU)

#### Introduction

In the last few years, Singapore schools have been introduced to lesson study as a professional development tool. Curriculum, Teaching and Learning Academic Group (CTL) at the National Institute of Education has been spearheading the training of teachers and school leaders in Lesson Study since 2006. This year, Mathematics and Mathematics Education Academic Group introduced a new in-service course on lesson study. Several schools have started Lesson Study teams in a range of subjects and across grade levels. This Lesson Study symposium is organized specially for mathematics teachers, will provide a platform for Lesson Study teams in mathematics from our schools to share their experiences. It will also help teachers who are interested in this professional development tool to learn more about Lesson Study. Participants will get to see research lessons and be engaged in fruitful discussions about mathematics curriculum, teaching and learning.

The scientific programme is arranged to achieve the following goals:

- To provide an overview of lesson study and its potential in professional development of mathematics teachers. There will be an insightful **keynote address** on what lesson study is all about and how it benefits teachers and students by Dr Akihiko Takahashi (DePaul University, Chicago), an expert in lesson study who has many years of experience in using lesson study in Japan, where lesson study originates, and the USA. Dr Fang Yanping (CRPP-CTL/NIE) will deliver a **keynote address** on lesson study in the local context.
- To provide opportunity to engage in research lessons and the postlesson discussion. There will two live **research lessons**, one for primary teachers and one for secondary teachers. The primary research lesson will be done by Princess Elizabeth Primary Scholl Lesson Study Team led by Cheng Mee Eng. The secondary research lesson will be taught by Dr Akihiko Takahashi and the students are from Montfort Secondary School. The post-lesson discussion panel will be chaired by Dr Yeap Ban Har (NIE) and Edmund Lim (Montfort Secondary School).
- To provide a platform for sharing of experiences in using lesson study in Singapore schools. Listen to Singapore schools that have tried out lesson study and learn from their experience in the **concurrent sessions**. Build networks with like-minded colleagues across the island. There will also be a **plenary panel** to discuss issues and challenges of doing lesson study with a superintendent, a vice-principal and a head of mathematics department forming the panel alongside the keynote speaker and professors from NIE.
- Books on lesson study and Japanese textbooks are available for preview and purchase outside Mathematics Lab.

### Venue

National Institute of Education Nanyang Technological University 1 Nanyang Walk Singapore 637616

Tel: 6790 3888

Registration LT2 (Block 7, Ground Floor)

Main Room LT2 (Block 7, Ground Floor)

Research Lesson NIE7-TR63 and NIE7-TR65

Concurrent Mathematics Labs 2, 4 and 5 (Block 7, Basement 1)

Sessions TR61 (Block 7, Level 1)

## **Programme**

O830 - 0900	Registration @ LT2 Block 7 Level 1	
0900 - 0910	Opening @ LT2	
0910 – 1010	Keynote Address 1 @ LT2 Lesson Study: An Introduction Dr Akihiko Takahashi DePaul University Chicago, USA	
1010 - 1025	Break & Networking	
1025 – 1125	Keynote Address 2 @ LT2 Putting Theory into Practice Teaching Equivalent Fractions for Understanding in Two Cycles of Lesson Study Dr Fang Yanping National Institute of Education Nanyang Technological University Singapore	
1125 – 1225	Concurrent Sessions	
1225 – 1325	Lunch (not provided) & Interaction  Book Display @ Maths Lab Block 7 Basement	

Please go to TR61 or TR63 for the research lessons at 1325. The lesson will start at 1330.

1330 - 1530 Research Lessons including Post-Lesson Discussion

Research Lesson on Primary Mathematics RL P11 Princess Elizabeth Primary School Lesson developed and taught by PEPS LS Team Chair: Dr Yeap Ban Har (NIE) TR63 Block 7

Research Lesson on Secondary Mathematics RL S11 Montfort Secondary School Lesson developed and taught by Dr Akihiko Takahashi Chair: Edmund Lim (Montfort Secondary School) TR65 Block 7

1530 - 1600 Break & Networking

Book Display @ Maths Lab Block 7 Basement

1600 - 1700 Plenary Panel @ LT2

Mrs Christine Anne Kong Superintendent /East 7 Schools Division, Ministry of Education

Mr Edmund Lim Wee Kiat Vice-Principal Montfort Secondary School

Mrs Cheng Mee Eng Head of Department / Mathematics Princess Elizabeth Primary School

A/P Christine Lee Head, Curriculum, Teaching & Learning (CTL) National Institute of Education Nanyang Technological University

A/P Berinderjeet Kaur President, Association for Mathematics Educators Mathematics & Mathematics Education Centre for Research in Pedagogy & Practice (CRPP) National Institute of Education Nanyang Technological University

Dr Akihiko Takahashi De Paul University

Chair: Dr Yeap Ban Har National Institute of Education

# **Concurrent Sessions**

Venue	1125 - 1155	1155 - 1225
ML 2	Session 111  Tan Su Ping  Bowen Secondary  Developing Conceptual  Understanding in Secondary Mathematics with the Use of Lesson Study: A Case Study	Session 112  Kamaleaswari Thiagayson & Gary Phua Chwee Ghua Serangoon Secondary Research Lesson on Statistics
ML 4	Session 121 Emilia Valerie Lo, Hong Yew Meng & Balakrishnan Kumeran Wellington Primary Lesson Study on Stick Tricks	Session 122 Venice Kong & Mubina Faizie  Guangyang Primary Implementing Lesson Study Through Two Different Approaches
ML 5	Session 131 Ang Yuin Hur & Norazidah Abdol Aziz Montfort Secondary  Key Learning Points from a Research Lesson on Median	Session 132 Serena Tay Hwee Khim, Ariel Loh Lee Miang & Kelly Lee Li Choo Wellington Primary Lesson Study on Teaching of Odd and Even Numbers
TR61	Session 141 <b>Cheng Mee Eng</b> Princess Elizabeth Primary  Developing New Eyes to  Mathematics Learning	

### Thank You

- A/P Wong Khoon Yoong (Head/MME), A/P Christine Lee (Head/CTL) and A/P Berinderjeet Kaur (President/AME) for your support and advice in the planning of this inaugural symposium.
- Dr Akihiko Takahashi and Dr Fang Yanping for the keynote address. Also, Dr Takahashi for teaching a research lesson and your participation in the plenary panel.
- Mrs Christine Anne Kong (Superintendent / East 7), Mr Edmund Lim (Vice-Principal, Montfort Secondary School), Mrs Cheng Mee Eng (HOD / Mathematics), A/P Berinderjeet Kaur and A/P Christine Lee for your contributions to the plenary panel.
- Principals, Vice-Principals, Teachers and Students of Princess Elizabeth Primary School and Montfort Secondary School for your participation in the Research Lessons.
- All presenters in the concurrent sessions for sharing your initial work in lesson study.
- CTL, MME and CRPP faculty who contribute to the scientific programme in one way or another. In particular, Ms Ho Siew Yin for helping with the logistics and Dr Cheng Lu Pien for being the master-of-ceremony.
- Low Chwee Tee, Michelle Quek, Mohd Fadzli, Ang Kheng Yeong, Ngo Hong Tat, Rodziah Abdul Rahman, Low Lian Tin and Sharifah Thalha from CTL, MME and CRPP for your invaluable help in all aspects of the running of the symposium.
- National Institute of Education for the use of the venue.

Symposium Convenor Yeap Ban Har MME / NIE