

A Magical Workshop on CREATIVITY IN MATHEMATICS EDUCATION

About This Magical Workshop

This is a fun filled, hands-on and minds-on workshop on creativity in Maths Education. In this workshop Ms. Teoh Poh Yew will share with the participants on how to instil intrinsic motivation in learning maths.

Learners enjoy activities that involve magic, puzzles and games. Thus an enjoyable and interesting way for learning problem solving is by solving recreational mathematics problems. Appropriate recreational problems stimulate intellectual curiosity, develop problem solving skills, promote discovery and thinking skills, as well as unleash creativity. These problems appear to be recreational or magical in nature but they are actually based on sound mathematical concepts. In solving these problems, learners actively participate in discovering or deciphering the hidden principles underlying each problem and in the process construct their own knowledge of mathematics. The mathematical principles learned are not imposed on them but come about as a result of their own mental construction that involves the fitting of new information with what they already know. The learning generated in using these recreational problems is constructivist in nature. It is based on opportunities to develop and exercise mathematical reasoning and problem solving activities that promote active meaningful knowledge construction among the learners.

Mathematical magic can serve as an effective means of motivation at almost all levels of instruction. The major purpose of its use in the classroom is to enable learners to discover that mathematics is easy and interesting, and thus stimulate interest in their further study of mathematics.

Rationale

Mathematics is the foundation of all science and technology subjects. Success in mathematics can make our students more self-assured, and lead them to excellence in other areas of learning. Therefore it is crucial for our younger generations to be competent in mathematics. Unfortunately, many students and even some teachers have misconceptions about mathematics, thus making mathematics a difficult and boring subject for them. This Magical Workshop on Creativity in Maths Education aims to help teachers appreciate the true nature of mathematics. It also aims to help them realize that helping students to learn maths can be such fun with some creative magic touch. This course emphasizes **helping student to learn** rather than teaching them.

Objectives

At the end of this workshop, participants will be able to

- recognise the importance of creativity
- describe five elements of creativity
- practice the five steps to creativity
- identify the barriers to creativity
- facilitate the learning of mathematics creatively using some mathematical magic, games, and puzzles
- explore the possibilities of using the same magic/puzzle/games to inspire students of different grades and varying levels of ability for different learning objectives
- motivate reluctant learners using the following approaches:
 - helping them to set goals and planning for success
 - coaching them according to their ability
 - giving them chances to show their ability in the class
 - recognising their potential/talent in other areas
- make a paradigm shift from catering for basic and performance need to catering for students excitement need (Kano Model) in Maths Education

Strategies / Approaches

This is a fun filled, hands-on and minds-on workshop on creativity in Maths Education. It will be conducted in a workshop setting with 5 to 6 participants in a group. Participants will also be given a chance to share their own creative teaching approaches to their fellow participants.

Schedule	
Day 1, WEDNESDAY (7 April 2010)	
0815 - 0830	REGISTRATION
0830 - 1030	<ul style="list-style-type: none"> The importance of creativity Creativity is about making connections Connecting Maths with magic Creativity is about variations
1030 - 1100	Tea Break
1100 - 1300	<ul style="list-style-type: none"> 5 steps to creativity The barriers to creativity Creativity is about thinking out of the box
1300 - 1430	Lunch Break
1430 - 1630	<ul style="list-style-type: none"> Mega Creativity Creativity is about saying "YES" to impossibilities Developing creativity through multiple intelligences Torrance's Criteria for the Measurement of Creativity
1630 - 1700	Tea Break
Day 2, THURSDAY (8 April 2010)	
0830 - 1030	<ul style="list-style-type: none"> The art of teaching Sharpen Your Minds with Puzzles Problem Solving Strategies Creativity is about making things faster and better
1030 - 1100	Tea Break
1100 - 1300	<ul style="list-style-type: none"> Helping children to love maths How to motivate reluctant learners Goal setting – planning for success How to cater for gifted children
1300 - 1430	Lunch Break
1430 - 1615	<ul style="list-style-type: none"> Amazing Mathematical Card Tricks Paradigm Shifts in Maths Education The importance of excitement need in Maths Education (Kano Model) Using magic to increase retention Q & A
1615 - 1630	Closing & Certificate Presentation Ceremony
1630 - 1700	Tea Break

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



Introducing the Workshop Facilitator

Ms. Teoh Poh Yew is a dynamic and creative Mathematics educator who firmly believes that everyone can be creative and everyone can enjoy mathematics. She is particularly interested in using mathematical magic to develop creativity, mathematical thinking and problem solving abilities. Ms. Teoh is a very experienced international speaker in the fields of creativity, training of trainers and mathematics education. She has conducted extremely innovative workshops in 14 countries around the world such as Malaysia, Singapore, Thailand, the Philippines, Indonesia, Bulgaria, Denmark, China, USA, Hong Kong, Czech Republic, Germany, India and Taiwan. She has also authored three books on mathematical magic and developed m-Wizy™ magic cards to facilitate understanding of mathematical concepts and creativity in a fun and magical way. She appears regularly on TV, radio, magazines and newspapers to share her experiences.

Participation Fees

- Type 1: **RM 410.00** per participant (Without Accommodation)
Type 2: **RM 590.00** per participant (Twin Sharing at RECSAM International House)
Type 3: **RM 710.00** per participant (Single Occupancy at RECSAM International House)

Accommodation at RECSAM International House

For type 2 & 3 participants boarded at the RECSAM International House

Check in A Day Before 1400 to 1800
Check out A Day After by 1200

Food

Morning tea, lunch and afternoon tea will be provided by SEAMEO RECSAM during the workshop sessions.
For stay-in participants (type 2 & type 3), breakfast and dinner will be provided.

Submission and Closing Date

All participation forms are to be submitted to the following latest by **31 March 2010**:
Director, SEAMEO RECSAM,
Jalan Sultan Azlan Shah, 11700 Gelugor, Penang.
or by Fax 04-6522737

Local Order Information

Pay to: SEAMEO RECSAM
Bank: Maybank Gelugor Branch, Penang
Account Number: 5571 5700 0647

For Enquiries

Dr. Daniel Leong / Ms. Khoo Suan Si
Email: ckleong@recsam.edu.my
Telephone: 04-6522741 / 6522746

Participation Form

Name: _____

School / Organisation: _____

Gender: Male / Female: _____

Telephone: Office: _____ Home: _____ Mobile: _____

Email: _____

Do you need accommodation at RECSAM International House?

Yes Date: _____ No

I enclose a cheque /local order / postal order

No: _____ bearing the sum of RM _____ as payment for the workshop.

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

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

Director, SEAMEO RECSAM, 11700 Gelugor, Pulau Pinang. Fax: 04-6522737

Closing date for registration is **31 March 2010**.

Signature: _____ Date: _____



Passion for Learning

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7 & 8 April 2010

at
SEAMEO RECSAM, Penang

by
Teoh Poh Yew
Mathematics Education Consultant
CEO, Creative Wizard Sdn. Bhd.

Organised by
Southeast Asian Ministers of Education Organisation
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