Faces of ICME-12

Mathematical Carnival – A Student's Look

Plenary Lecture – Math education in East Asia (Korea-China-Japan)

Plenary lectures have been held every day throughout the entire week; yesterday's was the panel discussion on Math education in East Asia (Korea-China-Japan). The panelists included Frederick Leung of Hong Kong, Binyan Xu of China, Kyungmee Park of Korea, and Yoshinori Shimizu of Japan.

They began by showing statistics of mathematical achievement around the world, implying that students in such countries as China, Hong Kong, Japan, Korea, Singapore, and Taiwan, have been "performing well in international studies of mathematics achievements such as TIMSS and PISA." Students in East Asian countries seem to have a better and quicker understanding in the classroom, than do those in Western countries.

The reasoning behind the learning gap between the East and West is mainly ridden in the opposing teaching methods of each. While the Eastern view of the classroom focuses on the product or content of mathematics, the Western view focuses on the process of doing mathematics; the East emphasizes "passive knowledge" over "active construction."

The panel continued with a look into different classroom teaching methods in East Asian countries; literally a look into the classroom, through video recordings of what typical classrooms in Japan, Korea, and China, are like. The most interesting was of Korea's "teacher-centered traditional teaching" method, in which the teacher would not allow her elementary students to leave class until they memorized the entire multiplication table.

Panelists joked along with each other, in that their cultures are in fact quite similar to one another in the classroom paradigm. It was thusly so, as they concluded the lecture with the fact that China, Korea, and Japan share a common culture: Confucian Heritage Culture (CHC). In this state, the social orientation of its people is stressed, over the individual orientation found in western societies. Not only the shared Eastern culture, but views and attitudes toward education—significance of education portrayed by the community, characteristics of the Chinese language, etc. — were discussed.

They included that "if culture does impact upon education practices and student achievement, a cultural explanation also means that [a] simple transplant of educational policies and practices from one culture to another won't work." Yet, it is crucial to be aware of cultural differences, to learn and know of others and of oneself. Frederick Leung of Hong Kong wrapped up the lecture with a Chinese proverb, "know yourself and know others, then you will win every battle."

A lot of students came to the carnival yesterday, as compared to other days of the week. Groups of middle school and high school students visited, and the hall suddenly filled up with teenagers. The booths that provided hands-on experience, to creatively enhance mathematical thinking, were of the most popular. It seemed as though the booths were a big hit, actually having students become more familiar with mathematics. Wearing a t-shirt titled "Pi" were two girls with math symbols painted on their faces. Jo Eun Ji and Jang Hee Youn from Ganjaeul Middle School said, "Our math club's name is 'Pi,' which explains the shirt. We even made pyramid key holders." When asked if they had enjoyed learning math before they came to the carnival, they said, "Frankly, no. These activities actually made us interested in math!"

Aside from just teenagers like Jo and Jang, young children also paid a visit to the carnival, hand-in-hand with their parents. Jeong Ji Oo and Jeong Ji Hoon, ages five and six, proudly held up their 14-squared Silla square for the photo above. The Silla square is a dice with 14 faces that have fun and daring demands on each side for the loser in games; for instance, one side may demand for the loser to "sing and dance in public." Their father was pleased to see that his children were enjoying themselves and with how the booth managers explained geometry using 3-D figures.

KOREA in 1 word?

"Interesting"
This is my first time abroad, so everything seems so new to me; especially meeting people from different cultural backgrounds.
- Margaret Iding, Michigan State University, U.S.

"Walking"
Everyone here walks so much, from subway stations to buildings, etc. That must be why the people are all slim here.
- Geetha Venkataraman, Ambedkar University, India

"Hot"
The weather is a bit hotter than in Japan, but I also mean to say that the Korean people are passionate!
- Kensuke Koizumi, Yokohama National University, Japan

"*Bbal-li, Bbal-li*"
(literal translation: "quickly, quickly")
Everything is so fast and everyone seems to be in a rush to do things here!
- Lena Koch, IMU Secretariat, Germany

"Cultured"
The Korean traditional buildings just seem very cultured and antique; it's very different from Australia.
- Janine McIntosh, Australian Mathematical Sciences Institute, Australia

"Friendly"
Korean people are very kind. A girl at my hotel tried to help me in every way possible although she had to resort to body language to communicate!
- Lalina Coulange, University of Bordeaux, France

Announcements

· Survey Team 1 (15:00-16:30, Room 401): ICME-12 – Panel on Textbooks, Curriculum, Technology, Students Placement, Support for Teachers and the Role of Research.
  See *Corrections* paper
· Plenary Lecture VII (Jo Boaler) is now changed to Regular Lecture sessions (13:30-14:30, Room 327C). Dr. Jo Boaler will be absent due to health problems. Sarah Selling, one of her students, will be replacing her.
· Survey Team 2 will cover for PL VII (9:00-10:00) and will continue their own presentation afterwards (15:00-16:30, Room 402).

ICME-12 Daily Newsletter

The 12th International Congress on Mathematical Education

Today's Highlight

• Survey Teams
- · ICME-12 – Panel on Textbooks, Curriculum, Technology, Students Placement, Support for Teachers and the Role of Research, 15:00-16:30, Room 401
- · Gender and Mathematics Education (revisited), 9:00-10:00, Hall D2 & 15:00-16:30, Room 402
- · Key Mathematical Concepts in the Transition from Secondary to University, 15:00-16:30, Hall E5
- · Socio-economic Influence on Students' Achievement, 15:00-16:30, Hall E6

Announcements

See page 2

Upcoming Events: Affiliated Study Groups

The 7th MCG International Conference
July 15-18, 2012/ Korea Science
Academy of KAIST

The International Group for Mathematical Creativity and Giftedness (MCG) is a professional society designed to support and promote mathematical creativity and giftedness in students of all ages and of various backgrounds.

The group has started in 1999 when Hartwig Meissner organized an International Conference on Creativity and Mathematics Education in Muenster, Germany. About 80 participants from more than 20 countries participated. In 2002 Agnis Andzans organized the second Conference on Creativity in Mathematics Education and the Education of Gifted Students in Riga, Latvia. At this meeting 40 experts from 15 countries discussed the role of creativity and the role of competitions for future developments in mathematics education. In August 2003, the Third International Conference on Creativity in Mathematics Education and the Education of Gifted Students was held with great success by Emiliya Velikova and her staff at the University of Rousse, Republic of Bulgaria. In July 2006, Alena Hospesova and her team organized the Fourth International Conference on Creativity in Mathematics Education and the Education of Gifted Students in a very attractive old city Ceske Budejovice, Czech Republic. There were approximately 40 participants from 22 countries who presented a broad range of interesting lectures and workshops. In February 2008, Roza Leikin and her team organized the Fifth International Conference on Creativity in Mathematics Education and the Education of Gifted Students in Haifa, Israel. About 200 participants from 24 countries attended 8 plenary lectures, about 50 projects and research presentations and 5 research symposia. For more details see conference website: http://www.mcg7.org.

The aims of the Group are to:
· Encourage research concerning the discovery, nurture and support of mathematical creativity, giftedness, talent and promise for all students;
· Support investigation and dissemination of information on the role of teacher knowledge and education, educational systems, and cultural aspects related to the development of mathematical creativity and promise;
· Stimulate regional and international activities to promote the aims of the Group;
· Cooperate with regional and international associations with similar aims;
· Organize international conferences and stimulate discourse between mathematicians, psychologists, educators, researchers, curricular designers and sociologists;
· Stimulate and support members of the Group to participate actively in conferences or projects, or other activities that enhance the aims of the Group;
· Further scientific publications and encourage the development of websites for effective communications;
· Assist educators and inform policy-makers.

Interested individuals from around the globe are invited to join us!

Website for MCG7 - http://www.mcg7.org

PME36: Conference of the International Group
for the Psychology of Mathematics Education
July 18-22, 2012/ Taipei, TAIWAN

The International Group for the Psychology of Mathematics Education (PME) is an autonomous body, governed as provided for in the constitution. It is an official subgroup of the International Commission for Mathematical Instruction (ICMI) and came into existence at the Third International Congress on Mathematics Education (ICME3) held in Karlsruhe, Germany in 1976.

The aims of the organization are:
· to promote international contacts and exchange of scientific information in the field of mathematical education;
· to promote and stimulate interdisciplinary research in the aforesaid area; and
· to further a deeper and more correct understanding of the psychology and other aspects of teaching and learning mathematics and the implications thereof.
The host organizing committee of PME36 is composed of members of Taiwan Association for Mathematics Education (TAME). Our effort will direct our annual meeting in 2012 to a social and scientific success. "Opportunities to Learn in Mathematics Education" is chosen as the theme of PME36 to meet the prospect that education should be developed and promoted in more diversified dimension.

Taiwan is also known, especially in the past, as Formosa. Taiwan is an island of East Asia in the western Pacific Ocean and located in the southeastern coast of mainland China. Separated from the Asian continent by the 160 km wide Taiwan Strait, the main island of the group is 394 km long and 144 km wide. The shape of the main island of Taiwan is similar to a sweet potato seen in a south-to-north direction, and therefore, Taiwanese, especially in the point of view of Min-nan division, often call themselves "children of the Sweet Potato." Taiwan's rapid economic growth in the decades after World War II has transformed it into an industrialized developed country and one of the Four Asian Tigers. This economic rise is known as the Taiwan Miracle. It is categorized as an advanced economy by the IMF and as a high-income economy by the World Bank. Its advanced technology industry plays a key role in the global economy.
We really hope you will have a wonderful time during your stay in Taiwan and look forward to seeing you in Taipei, in July 2012!

Website for PME36- http://www.tame.tw/pme36/

HPM2012: The International Study Group in the
relations between the HISTORY and PEDAGOGY
of MATHEMATICS
July 16-20, 2012/ Daejeon Convention Center,
Daejeon, Korea

HPM is the International Study Group on the Relations between History and Pedagogy of Mathematics affiliated to the International Commission on Mathematical Instruction (ICMI). By combining the history of mathematics with the teaching and learning of mathematics, HPM is the link between the past and the future of mathematics. Therefore, the group aims at stressing the conception of mathematics as a living science, a science with a long history, a vivid present and an as yet unforeseen future. Among members of the group are researchers in mathematics education, mathematicians, historians of mathematics, and teachers of mathematics and curriculum developers.

The HPM2012 is the eighth quadrennial meeting of the HPM Group. It is a satellite meeting of the corresponding ICME (International Congress on Mathematical Education) and is scheduled close to ICME-12. These quadrennial meetings are a major activity of HPM, to bring those together who are interested in the relation between the history of mathematics and mathematics education such as:
· Researchers in mathematics education and its relation to the history of mathematics;
· Mathematics teachers at all levels who are eager to get insights on how the history of mathematics may be integrated into teaching and help students to learn mathematics;
· Historians of mathematics, who wish to talk about their research;
· Mathematicians, who want to learn about new possibilities to teach their discipline;
· All those with an interest in the history of mathematics and pedagogy.
For more information, please visit our website for HPM2012 - http://hpm2012.org/
The HPM2012 is welcoming everyone who is interested in the history of mathematics and mathematics education! To board the Bus from COEX to Toyoko Inn (Deajeon), please check the following information.

Remember July 15 2:40 PM Poster Session Place!!
1. New Meeting Point: Information Desk in the foyer of Grand Ballroom on the first floor near North Gate of COEX. This is the place where the poster session of ICME-12 is held. After the Happy Hour, take the escalator down to the first floor. Then you will arrive at the Meeting Point.
2. The bus fare is $10 (10 Euros, 1,000 Yens or 10,000 Wons) per each person.
3. Professor Sung Sook Kim (a member of LOC of both ICME-12 and HPM2012) will be waiting for you at the New Meeting Point and guide you to board on the bus.