



THE NEWSLETTER OF  
THE EAST-ASIAN ASSOCIATION FOR SCIENCE EDUCATION  
東亞科學教育學會通訊

VOL.2, No.1  
No. 0005  
Mar. 15, 2009

#608, Education Information Hall (10-1),  
Seoul National University  
599 Gwanangro, Gwanak-gu, Seoul,  
151-742, Korea  
ph: +82-2-880-4490 fax: +82-2-882-4487  
http://theease.org/

## International Conference of East-Asian Science Education

Date: Oct. 21-23, 2009

東亞科學教育研討會 First Biennial EASE Conference

Venue: Howard International House, Taipei, Taiwan

Conference Theme:  
Science Education for Tomorrow (SET): Voices of East Asia

### Registration fees

		Early Registration
Regular member	US\$150 (NT\$4500)	US\$120 (NT\$3600)
Student Member	US\$ 50 (NT\$1500)	US\$ 40 (NT\$1200)

(Including, Conference, 1 banquet and 2 free city-tours) (need to check availability):

### Important Dates

Abstract submission (150 -500 words, English only): May 31, 2009  
Notification of paper acceptance: June 30, 2009  
Deadline for full text paper submission (optional): July 31, 2009

For registration or information, please visit the website below.

Contact: Prof. Chi-Jui LIEN (National Taipei University of Education,  
cjlien@tea.ntue.edu.tw) <http://esciedu.nctu.edu.tw/ease/>



**Due Date (May 31)  
is coming soon!**

### Conference Strands

- + Curriculum and Teaching in Science
- + Learning Science in Schools
- + Learning Science in Informal Settings
- + Educational Technology for Science Education
- + Professional Development for Science Teachers
- + History and Philosophy in Science Education
- + Policy in Science Education
- + Assessment and Comparative Studies in Science Education
- + Collaborative studies and Cooperation
- + Region-specific science education

## The First EASE Symposium: Science Education Research and Postgraduate Education in East Asia

Benny H. W. Yung (Vice-president of EASE, University of Hong-Kong)

Following discussions dated back to 2001, the East-Asian Association for Science Education (EASE) was finally established on 31 Oct. 2007. Three of the aims of the Association are: (1) to enhance the range and quality of research, teaching and learning in science education in East Asia, in particular, those related to the culture and heritage of The Constituent Regions; (2) to provide a platform for collaboration in science education among The Constituent Regions; and (3) to foster links between science education researchers in The Constituent Regions and similar communities elsewhere in the world. To help achieving these aims, a summer workshop for research graduate students was proposed to be held in the summer of 2010. To follow up this proposal, the Executive Members of EASE deemed necessary to collect more background information from the Constituent Regions for further planning. Hence, a symposium entitled Science Education Research and Postgraduate Education in East Asia was held on October 31, 2008 as a part of the 2008 International Conference on Science Education for the Next Society hosted by the Seoul National University. The purpose of the symposium was to provide a forum for participants to exchange views on how best the summer workshop could be organized.

The symposium was presided by our Chairman, Professor Masakata Ogawa (Japan) and supported by Dr. Young-Shin Park (Korea), Professor Xingkai Luo (Mainland China), Professor Chi-ju Li (Taiwan) and Dr. Benny Hin Wai Yung (Hong Kong). It began with each representative presenting the situation in their own region, highlighting the strengths and challenges that they are facing, providing suggestions on how their strengths can contribute to the summer workshop and how the challenges that they are facing can be addressed by the summer workshop. This was then followed by a general discussion session where other conference participants, including Professor John Gilbert, joined in to provide their perspectives and suggestions.

On the next day, the Executive Members reviewed the proposal of organizing a summer workshop in 2010 based on the information and opinions expressed in the symposium. They were of the view that the Association, at its present stage of growth, was premature to organize the summer workshop.



1st EASE Symposium

## News from Korea/Region: 55th Conference of KASE in KOREA

Eun Ah Lee (Seoul National University) **KASE 한국과학교육학회**

From February, 5th to 7th, 2009, the 55th conference of The Korean Association for Science Education (KASE) was held in Gyeonggi Campus of Gyeongin National University of Education, Korea. The Korean Association for Science Education (President: Byeong-Soon Choi) is a major association in Korean science education community and its conference is held biannually. More than hundred research works were presented in this conference and science educators from all over Korea gathered to present and/or discuss their current research works under the main theme, "Teacher Preparation Curriculum in Colleges and Science Teacher Recruiting System." Professor Ik-Gyun Kim of Chungbuk National University gave the keynote speech and three discussants presented their opinions. Professor Chan-Jong Kim (Director of BK21 SENS, Seoul National University) also gave the speech for the special forum. Overall, total of 109 presentations were given, including 56 paper presentations, 45 poster presentations and 8 workshops, and they showed the broad and various area of interests in Korean science education community. The next conference will be in summer, 2009.

**UCHIDA**

<http://www.uchida.co.jp/global/>

### Mission of EASE

- Fostering networks among researchers
- Being a platform for collaboration and cooperation
- Contributing to policies and practices through research
- Enhancing research relevant to our culture and heritage



## Multi-Paradigmatic Transformative Educational Research

Peter Charles Taylor (Associate Professor of Transformative Education, Curtin University of Technology)



We find ourselves immersed in an age of great uncertainty, some call it a new dark age. The world is wracked by global crises, forcing us to rethink many of the key fundamentals of our lives. Financial, climatic, natural resource and security crises are acting in concert on the world stage to rob us of our confidence in our modern worldview. We are now aware that an uncritical commitment to centuries of economic expansion, development and consumption, much of which has been driven by science and technology, has contributed to unsustainable global exploitation. Today, leading organizations such as UNESCO, the World Wildlife Fund for Nature Conservation and TerraLingua lament the resulting collapse of cultural, linguistic and biological diversity.

How can science education contribute to resolving this seemingly intractable set of problems? Specifically, how can we prepare teachers with the ability to design and enact socially responsible science teaching that produces critical and creative citizens armed with essential skills for resolving the world's eco-cultural crises? And in particular, how can educational research contribute to this process? Research being conducted at the Science and Mathematics Education Centre (SMEC), Curtin University of Technology, is responding to these questions. An innovative approach to teacher professional development is being employed to engage postgraduate students in transformative educational research. Here the researcher adopts the role of critical and creative learner and employs epistemologies (or theories of knowledge) drawn from multiple research paradigms relatively new to science education. The purpose is to explore and develop the transformative potential of the researcher's own professional practice and/or the practices of his/her colleagues.

The following titles of doctoral theses completed by SMEC students illustrate contemporary possibilities of transformative science education research.

- Exploring the meaning that lies within - the essence of innovation for university science educators (Fraser, 2008)
- Towards a culture-sensitive pedagogy of physics teacher education in Mozambique (Cupane, 2008)
- Integrating science and soul in education: The lived experience of a science educator bringing holistic and integral perspectives to the transformation of science teaching (Stack, 2007)
- Developing a culturally inclusive philosophy of science teacher education in Mozambique (Afonso, 2007)
- Transforming the culture of teaching and learning in science: The promise of ethical dilemma stories (Settelmaier, 2003)

What type of knowledge is produced by such research? The answer depends on which epistemologies are chosen and the research paradigms they are drawn from. The paradigm of positivism dominated social science research for much of the twentieth century, with its emphasis on producing objective measurable knowledge of the material world in accordance with the 'gold' standards of validity and reliability. In recent decades three new epistemologies, accompanied by new quality standards, have been shaping the questions asked and methodologies enacted by educational researchers. Science educators have embraced the research paradigm of interpretivism with its focus on understanding how the world looks and feels to the 'ethnographic other' and how this understanding is generated through the interacting subjectivities (values, beliefs, assumptions, aspirations, spiritualities, cultural lenses) of both the researcher and his/her co-participants. With a concern for identifying invisible social, cultural and political factors that distort educational policies and practices and that perpetuate social injustices and inequities, science educators have embraced the research paradigm of criticalism and become political analysts and brokers of indigenous knowledge systems. Recently, the postmodern paradigm has become a source of creative inspiration for science educators because of its emphasis on new logics of inquiry (e.g., dialectics, metaphor, poetics) and arts-based genres (e.g., impressionist tales, photo-imagery) for engaging themselves and the readers of their research in pedagogical thoughtfulness.

For innovative researchers, the question arises as to which research paradigm to choose for framing their inquiry. Traditionally, the paradigm of positivism served as a seemingly natural framework within which science educators designed studies to test causal inferences about the interaction of variables of interest. With a shift of allegiance to interpretivism, many researchers immersed themselves within this alternative epistemological framework and used only qualitative methods. This polarization resulted in the 'paradigm wars' of the early 1980s, the echoes of which can still be heard today as quantitative and qualitative researchers continue to do battle. (NB. A false rapprochement was achieved when positivists colonized qualitative methods to create the 'mixed methods' concept.)

However, with the arrival of the critical and postmodern paradigms, researchers soon began to design multi-paradigmatic studies such as 'critical interpretive' inquiry. Thus it no longer made sense to think in terms of restricting one's research design to within a single epistemic framework. Instead multi-paradigmatic researchers have come to think of themselves as working within a creative design space, much as do artists, drawing multiple epistemic referents from whichever research paradigms best suit their purposes. These researchers can draw on an exciting range of new research methods – autobiography, narrative inquiry, ethnography, co-generative inquiry, performance texts, impressionistic tales – with which to develop their professional capacity to respond creatively to rapidly changing social, cultural, and environmental circumstances in their own countries and local communities.

The Transformative Education Research Group (TERG) was established in 2006 at Curtin University of Technology. Now in its fourth year, the TERG, led by A/Prof Peter Charles Taylor, comprises researchers from the Faculty of Science and Engineering and the Faculty of Humanities. Our vision is for revitalized and ethically astute systems of education worldwide contributing directly to environmental, cultural and personal sustainability.

### Conferences in the World

World Conference on Education for Sustainable

Development 31 Mar.- 2 Apr. @Bonn

NARST 2009 17-21 Apr., 2009 @Garden Grove, CA, USA.

5<sup>th</sup> World Environmental Education Congress

10-14 May, 2009 @Montreal, Canada

VII<sup>th</sup> IOSTE Symposium for Central and Eastern Europe

14-18 June, 2009, Siauliai, Lithuania

40<sup>th</sup> ASERA 2009 1-4 Jul., 2009 @ Deakin University, Victoria, Australia. (Abstract until 30 April)

CONASTA58 4-7, Jul., 2009 @Hotel Grand Chancellor, Launceston, Tasmania, Au.

33<sup>rd</sup> Annual Meeting of JSSE

25-26 Aug., 2009 @Doshisha Women's University, Kyoto, Japan

SJST 2009 18-19 Aug. 2009 @Miyagi

University of Education, Sendai, Japan

ESERA 2009 <http://www.esera2009.org/>

31 Aug. - 4 Sep., 2009 @Istanbul, Turkey

EASE 2009 <http://theease.org/>

21-23 Oct., 2009 @Taipei, Taiwan

Abstract submission until May 31.

International Science Education Conference

2009 24-26 Nov., 2009

@National Institute of Education, Singapore

### Welcome new editor!

Eun Ah Lee (Seoul National University)  
Hello, Everyone! I am happy to join the EASE Newsletter team. It is great pleasure to work with these wonderful colleagues.

EASE newsletter is published quarterly and this is the first number of the second volume. Editors are appreciating for all the cooperation and contributions of our authors. We plan to send this e-mail newsletter with information related to science education in East-Asia and all over the world, to all EASE members timely. If you have any news of science education, please send it to Professor Hisashi Otsuji ([otsujih@mx.ibaraki.ac.jp](mailto:otsujih@mx.ibaraki.ac.jp)) or me ([eunahj@snu.ac.kr](mailto:eunahj@snu.ac.kr)). We will help you to share the news with all EASE members.

**EASE membership** contact Young-Shin Park  
[parkys@chosun.ac.kr](mailto:parkys@chosun.ac.kr)