



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

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http://theease.org/

First Announcement !!!
The First EASE Conference

DATE: Oct. 21-23, 2009

VENUE : Taipei

(Details of the Conference Hotel: TBA)

Conference Theme

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

Tentative Strands:

Curriculum and Teaching, Learning Science in Schools, Learning Science in Informal Settings, ICT and Science Education, Professional Development of Science Teachers, History and Philosophy of Science in Science Education, Policy of Science Education, Assessment and Comparative Studies, Collaborative Studies, Region-Specific Issues, etc

Registration fees:

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

Proposal Call

Due Date: April 30th, 2009

Contact: Prof. Huann-shyang Lin (huannlin@faculty.nsysu.edu.tw)

EASE strongly encourages participation of younger generation of science education researchers (junior faculty as well as graduate students) from our regions in order to find out prospective colleagues and research partners from other neighbor regions. We are therefore inviting young researchers and educators to help in organizing this important event. Those who are interested, please send an email to Masakata Ogawa (ogawam@kobe-u.ac.jp). Your kind help and enthusiasm will be much appreciated.



Foreign Professor Position Announcement

@ Seoul National University (<http://www.snu.ac.kr>), Korea
Title: Assistant/Associative Professor in Science Education
Deadline: September 30th for starting March 1st 2009
Qualifications: PhD in Science Education, Informal Science Education, College Science Teaching
Salary: Commensurate with experience
Financial support: including an apartment on campus and air fare
Contact: Jinwoong Song (jwsong@snu.ac.kr, +82-2-880-8266)

List of Science Education Journals in the World

Masakata Ogawa (Kobe University, Japan) While EASE members recognize some major research journals like *Science Education*, *Journal of Research in Science Teaching*, *International Journal of Science Education*, *Research in Science Education*, and *International Journal of Science and Mathematics Education*, they pay little attention to international journals published in

Missions 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

other neighbor regions. Here presented a list of such journals as well as other international journals. Hope it be helpful for our grad students.

Other Region-Oriented International Journals

- Journal of Baltic Science Education (<http://www.jbse.webinfo.lt/journal.htm>)
- Eurasia Journal of Mathematics, Science and Technology Education (<http://www.ejmste.com/>)
- Canadian Journal of Science, Mathematics and Technology Education (right now, no website available)
- Journal of Science and Mathematics Education In Southeast Asia (<http://www.recsam.edu.my/html/Journal%20of%20Science%20and%20Mathematics.htm>)
- African Journal of Mathematics, Science and Technology Education (http://www.journals.co.za/ej/ejour_saarmste.html)

School Science Review (<http://www.ase.org.uk/hlm/journals/ssr/index.php>)

Other International Journals

- Studies in Science Education (<http://www.informaworld.com/smpptitle-content=t790627368~db=all>)
- Science & Education (<http://www.springer.com/education/mathematics+education/journal/11191>)
- Journal of Science Teacher Education (<http://www.springer.com/education/science+education/journal/10972>)
- Cultural Studies of Science Education (<http://www.springer.com/education/journal/11422>)
- The Electronic Journal of Science Education (<http://ejse.southwestern.edu/>)
- Research in Science & Technological Education (<http://www.tandf.co.uk/journals/carfax/02635143.html>)

A Scene of Science Teacher Education in East Asia



During a weekend trip of geology, Dr. Takashi ITO from college of education, Ibaraki University, Japan, spent a whole day climbing on a volcano with his pre-service student teachers. He explained the formation and shape of the volcano to his students. His prior experience as a

teacher in an educational TV program for high school students enabled him to bring the wonder of geology and nature. He says, "This volcano locates only 3 hours drive from my university. I can give my students a close look at the active fumarole around the crater. I prefer to let them think based on the reality. Evidence-based Practice!"

Join us !

I am the head secretary of the EASE, Young-Shin Park at Seoul National University, Korea.

For membership of EASE: It costs only US\$ 20 a year to be a member of EASE (US\$ 10 for students).

For more information: Just visit EASE Website. You can find useful information in EASE website: <http://theease.org>
Don't hesitate to contact me for further information.



Young-Shin Park
pys68@snu.ac.kr



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

Call for your regional information

This Newsletter is planned to be published at least quarterly. We also have been sending email newsletters with information related to science education in East Asia and all over the world, to all members of EASE more often. Please send us any news about science education around you to pys68@snu.ac.kr at any time. We will help you spread the news around.



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Teachers' and Students' Conceptions of Good Science Teaching: Invitations for collaborative comparative studies

Benny Hin Wai YUNG and Siu Ling WONG
(The University of Hong Kong)

The Hong Kong Study

The Conception of Good Science Teaching (CoGST) of 4024 Year 7 students and 110 teachers in Hong Kong were probed using two video-based survey instruments, each of which consists of 55 items that are linked to a video of exemplary science lesson. During the survey, the lesson videos were shown to intact classes of students (and their teacher) at the same time. The videos were stopped at intervals where the respondents were then asked to rate, on a 5-point scale, the extent to which they regarded each item listed in the questionnaire as an essential feature of good science teaching.

Exploratory factor analysis was used to identify latent factors explaining the student data. We refer to these factors as dimensions of good science teaching. Scale reliability for the factor scores was also established. Then differences between student and teacher perceptions about good science teaching were examined. Results revealed a CoGST model of 11 dimensions. They can be grouped three domains as shown in Figure 1.

Of the 11 dimensions, eight are generic to the teaching of all subjects, while three are specific to science. Among the eight generic dimensions of good teaching, four are related to the affective domain and concerns a teacher's ability to produce a classroom environment that is enjoyable and conducive to learning for students. The remaining four points to the competence of the teacher in delivering content knowledge effectively to the students, hence are referred to as cognitively-oriented dimensions.

The biggest gap between teachers and students lies in the dimension of Preparing Students for Examination. Teachers ranked this as the least important dimension while students saw it as the most important. This could

Science-specific Dimensions

Focusing on science
Modeling data interpretation
Encouraging active experimentation

Generic Dimensions

Affective Dimensions

Valuing student contribution
Creating a conducive learning environment
Encouraging student involvement
Making learning fun

Cognitive Dimensions

Facilitating understanding
Establishing a clear learning purpose
Using diverse teaching methods
Preparing students for examination

Figure 1: The eleven dimensions of teachers' and students' conception of good science teaching

be attributed to the examination pressure that students face in Hong Kong.

The findings of this study raise important questions of how the identified gaps between teachers' and students' CoGST can be addressed. Who is to change, the teachers, the students or both? And how? A follow-up study is underway in four of the participating schools to help teachers to address these problems.

Current collaborations

Two comparative studies are being conducted in Beijing and Wenzhou, Peoples' Republic of China. Shanghai is actively considering joining the study.

Invitation to EASE members

We believe that EASE members will have much to learn from each other from the proposed comparative studies. If you are interested, please contact Dr. Benny Yung (email: hwyung@hku.hk).

Newly Revised Courses of Study in Japan:

How Will Science Classes Change?

Masakata Ogawa (Kobe University., Japan)

On March 28, 2008, Japanese government promulgated new Courses of Study (for kindergarten, elementary, and lower-secondary schools) after about 3 years' discussion and deliberation in the Central Council for Education. They are planning to be implemented partially from 2009, and fully in 2011 (kindergarten and elementary schools) and in 2012 (lower-secondary schools). The revision was guided by the amended Fundamental Law of Education in 2006 and accompanying amendment of Law of School Education, but its process was also significantly influenced by other factors visible for these several years; public concerns on youngsters' escape from 'learning' signaled in the results of OECD-PISA and/or relevant domestic surveys.

Rationales of the revision are (1) cultivating basic and fundamental knowledge and skills, (2) cultivating capabilities of logical thinking, decision making, and creative expression, (3) ascertaining enough class hours necessary to cultivate such capabilities, (4) enhancing students' eagerness to learn, and (5) establishing preferable habit of learning. Major emphases are laid upon (1) language learning activities beyond 'Japanese Language Classes,' (2) math and science education, (3) education on tradition and culture,

(4) moral education, (5) rich experiences in community and social activities, and (6) English activities in elementary level.

In terms of science, what is emphasized in the revision are (1) providing enough time for learning contents repeatedly, compiling meaningful reports on the findings through experimentation and observation, and developing their own ideas and writing them down, (2) contents in international standards, and systematic arrangement of contents, and (3) appropriate linkage among elementary, lower and upper secondary contents. Concretely, class hours for science are drastically increased. For the elementary level, total class hours (for 3rd to 6th grades) increase from 350 to 455 (+16%). For the lower secondary level, class hours for requisite science classes (for 7th to 9th graders) increase from 290 to 385 (+30%). The drastic increase is possible by policy change that extensive elective course system is perfectly abolished. While no significant changes in overall objectives in elementary science has happened, its strand structure is revised from traditional three strands system ('Life and Environment,' 'Matter and Energy' and 'Earth and Universe') to two strands system ('Matter and energy' and 'Life and Earth'), which is the same in the lower secondary science. Also, no significant changes in overall objectives are found in the lower secondary science but much more advanced concepts, which had been eliminated for these several decades due to class hours' decrease, are revived

to fill out the class hours increased. Emphasized are also the topics like 'relevancy to real life,' 'comprehensive views ((1) science and technology and human, (2) energy and environment, (3) life and environment, and (4) natural disasters),' and sustainable society as well as environmental education.

Scientific communities may appreciate the revision this time, because the contents are selected according to the system of science and school science program seems to be good for cultivating their next generation. However, some of science educators are rather bewildered, because the new science program seems to be an academic oriented 'revival' of that in 1970s. They are worried about that much more students are psychologically escaping from learning science even if they are forced to sit in 'required' science classes.

(Part of this essay was presented at Forum for Asian Science Education at the CASE2008 held in Kaohsiung, Taiwan on Feb. 20, 2008.)



Conferences in the World

- 39th ASERA 2008 www.asera.org.au
Jul. 2-5, 2008 @Rydges South Bank Brisbane, Australia.
- Science Inquiry Workshop 2008 www.nie.edu.sg
Jul. 24-25, 2008 @NIE, Singapore
- KASE 2008 www.koreascience.org/
Aug. 20-22, 2008 @Pusan National University, Pusan, Korea
- JSSE 2008 certcms.shinshu-u.ac.jp/jsse/
Aug. 22-24, 2008 @Okayama, Japan
- SJST 2008 wwwsoc.nii.ac.jp/sjst/
Sep. 14-15, 2008 @Fukui, Japan
- XIII IOSTE www.ioste2008.org
Sep. 21-26, 2008 @Izmir, Turkey
- ICSENS 2008 sens.snu.ac.kr/eng/
Oct. 30-Nov. 1, 2008 @Seoul National University
- NARST 2009 www.narst.org/annualconference/2009conference.cfm
Apr. 17-21, 2009 @Garden Grove, CA, USA.
- Deadline for receipt of proposals: August 15, 2008.
- 5th World Environmental Education Congress
May 10-14, 2009 @Montreal, Canada www.5weec.org
- ESERA 2009 www.esera2009.org/
Aug.31-Sep.4, 2009 @Istanbul, Turkey
- EASE 2009 theease.org/
Oct. 21-23, 2009 @Taipei, Taiwan
- EASE 2010 Summer Workshop for Research Students
International Science Education Conference 2009
Dec. 2-4, 2009 @National Institute of Education, Singapore



Report of Recent Conference – NARST

Young-Shin Park (Seoul National University, Korea)

Many scholars from Asia areas attended the NARST conference at Baltimore, MD from March 30 to April 2nd, 2008. I also had a brief EASE meeting with Prof H.C. She (Taiwan), Prof Benny Yung (Hong Kong), Harmen van Pradijs (Springer Pres), and Prof Gyungho Lee (Korea) to talk about the relationship between EASE and Springer Press. I also distributed hard copies of the 1st Newsletter at NARST and provided information to scholars who were much interested in EASE, to include them as members of EASE from abroad. It was great chance to inform them of the establishment and progress of EASE. The picture shows scholars from Oregon State, Taiwan, and Korea at NARST.



News from Korea

(1) The 54th Conference of KASE (Korean Association for Science Education)

“The comparison of science teacher employment system at secondary levels in Asia countries”
20th-22nd of August, 2008

Pusan National University, Pusan, Korea

Contact: karse@knu.ac.kr (Tel: +82-43-231-7223)

Invited Speakers:

- TUAN Hsiao-lin (National Changhua University of Education, Changhua, Taiwan)
- LUO Xingkai (Guangxi Normal University, P. R. China)
- ZHANG BaoHui (Nanyang Technology University, Singapore)
- KUMANO Yoshisuke (Shizuoka University, Japan)



See you in Pusan !

(2) The 3rd ICSENS (International Conference on Science Education for the Next Society)

“The Role of Science Education in High-Tech Society”

Oct 30, 31, Nov 1, 2008

Seoul National University, Seoul, Korea

Invited Speakers:

- John Gilbert (The University of Reading, UK)
- Brian Hand (University of Iowa, USA)
- Chin-Chung Tsai (National Taiwan University of Science and Technology, Taiwan)

More information: <http://sens.snu.ac.kr/icsens>

Contact information: bk21sens@snu.ac.kr (Tel: +82-2-880-4490)



Science Inquiry Workshop 2008

@ National Institute of Education, Singapore

July 24-25, 2008

Content: This workshop aims to share best teaching practices in inquiry science, which is the underlying theme of the new elementary and middle-school science syllabus in Singapore.

Three leading educators—Prof Frances Lawrenz (Univ of Minnesota), Prof Lawrence Benche (OISE), and Prof John Loughran (Monash Univ)—would be sharing their insights with about 150 local and regional participants. Besides conducting laboratory-based inquiry sessions and plenary talks, these speakers will also meet with faculty, interested teachers, and graduate students for more in-depth discussions during the event.

Textbooks of My Classes

I enjoyed reading these books with my sophomore students for these three years. (Masakata Ogawa, Kobe University, Japan)

Kim Tolley (2003). *The Science Education of American Girls: A Historical Perspective*. Routledge Falmer.

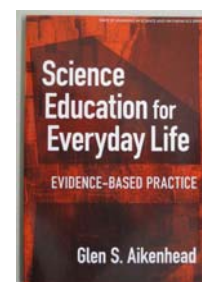
Science was a ‘girls’ subject’ in early 19th century. Why did girls turn away from science at the end of 19th century? Tolley explored this fascinating topic through a variety of historical materials. Science as a subject for ‘boys’; Oh, it’s our misunderstanding, wasn’t it!!

Glen Aikenhead (2006). *Science Education for Everyday Life: Evidence-based Practice*. Teachers College Press.

Science education should be much more ‘humanized.’ Presented is a huge and comprehensive collection of ‘research evidence’ which strongly suggested necessity of ‘humanistic approach to science teaching.’ (The book consists of 136 pages of the main text and 40 pages of reference list!!) The list is of worth keeping.

Deborah Corrigan, Justin Dillon, R. Gunstone (eds.) (2007). *The Re-Emergence of Values in Science Education*. Sense Publishers.

Science is a value-laden enterprise. Teaching science is also value-laden, but quite difficult to see it. Every chapter of this book explains how various kinds of values are involved in our activities called ‘teaching and learning science.’



Executive Members of EASE**President**

Masakata OGAWA (Kobe University)

Vice-President

Huann-Shyang LIN (National Sun Yat-Sen University)

Benny Hin Wai YUNG (The University of Hong Kong)

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Jinwoong SONG (Seoul National University)

Alice Siu Ling WONG (The University of Hong Kong)

Atsushi YOSHIDA (Aichi University of Education)

Benny Hin Wai YUNG (The University of Hong Kong)

Constitution of EASE**東亞科學教育學會規程****1 Name and Status**

1.1 The name of the association shall be 'The EASE (East-Asian Association for Science Education), referred to as 'The Association'. The Association comprises members from regions including China Mainland (中國大陸), Hong Kong(香港), Japan(日本), Korea(韓國), and Taiwan(臺灣). These regions are referred to as 'The Constituent Regions'.

1.2 'Science Education' shall refer to all aspects of education in respect of the natural sciences including physics, chemistry, biology, earth science, environmental science, general science, and applied science for learners of all ages.

1.3 'Research' shall refer to all forms of systematic inquiry.

1.4 The Executive shall, if necessary, establish the legality of this Constitution under national or international law as appropriate.

2 Aims

The aims of The Association shall be:

2.1 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;

2.2 to provide a platform for collaboration in science education among The Constituent Regions;

2.3 to seek to relate research to the policy and practice of science education in The

Constituent Regions;

2.4 to represent the professional interests of science education researchers in The Constituent Regions;

2.5 to foster links between science education researchers in The Constituent Regions and similar communities elsewhere in the world.

3 Membership

3.1 Personal membership of The Association is open to anyone who has interests in science education research.

3.2 Applications for personal membership shall be made on the Application Form provided.

3.3 The title and privileges of being a 'Personal Member of the Association' shall only be enjoyed by an individual over a period for which all the dues required by The Association have been paid.

3.4 Organizational membership of The Association shall be open to organizations which have a constitutional interest in research in science education.

3.5 Applications for organizational membership shall be made on the Application Form provided.

3.6 The title and privileges of being an 'Organizational Member of the Association' shall only be enjoyed by an organization over a period for which all the dues required by The Association have been paid.

4 The Executive

4.1 Decisions made on behalf of The Association shall be taken by The Executive.

4.2 Each personal member shall have the right to one vote in any election concerning The Association.

4.3 The Executive shall consist of elected members, with at least two representatives from each constituent regions of The Association. All nominations must be supported by a proposer and a seconder, who are Personal Members of The Association. The proposer and the seconder must also be coming from different Constituent Regions. Each of those elected will serve for four years. However, arrangements should be made as far as possible such that about half of the members on the Executive will be re-elected in every other two years to ensure smooth transition and continuity of work of The Association.

4.4 President, Vice-president, Secretary, and Treasurer will be directly elected among the elected members of The Executive. The term of office for each of the above-mentioned office bearers will be two years.

4.5 If a position on The Executive falls vacant, The Executive shall fill it by whatever means they deem necessary and which do not contradict the above conditions, until the next occasion for an election.

4.6 The duties of the President shall:

a. take charge of the affairs of The Association, including presiding the Biennial Conference of The Association;

b. serve as a Chair of The Executive;

c. be or designate a representative to affiliate organizations;

d. serve as or designate a representative as spokesperson for The Association.

4.7 During the Biennial Conference, The Executive will present a written report, which shall include Audited Accounts, of The Association. This report will be uploaded onto the official website of The Association for perusal by Members who are not present at the Biennial Conference of The Association. In years when the Biennial Conference does not take place, the written report will be sent to all Members and posted on the website.

4.8 The Organizer of the next Biennial Conference of The Association (which shall be organized to support communication on research matters between members of The Association and with others) shall automatically be co-opted on to The Executive.

4.9 Elections to The Executive shall, wherever possible, take place during a Biennial Conference of The Association such that results may be announced at that Conference.

4.10 Amendments to The Constitution either shall be proposed by a majority decision of The Executive or shall be proposed by at least thirty other Members of The Association who, in turn, must be coming from at least three of The Constituent Regions.

4.11 An amendment to The Constitution shall be agreed by a two-thirds majority of the members of The Association who vote in the ensuing referendum.

4.12 The Headquarter of The Association shall be established in a City at the discretion of The Executive.

4.13 Important documents produced in the course of Association business shall have an abstract in at least two different Asian languages.

5 Activities

5.1 The activities of The Association shall be addressed by such means as The Executive shall decide.

5.2 These means shall include the organization of Boards and shall include the organization of the Biennial Conferences of The Association.

5.3 The costs of each activity conducted on behalf of The Association shall be met by, or on behalf of, the activity, less any administrative input that The Executive shall decide to make. Any surplus generated by an activity shall be the property of The Association.

5.4 In order to conduct the business of The Association, The Executive shall be empowered both to collect an Annual Membership Fee from personal and Organizational Members of The Association and to make applications to Fund-Awarding Bodies on behalf of The Association.



EASE Founding Assembly, Seoul National University, Oct. 31, 2007