

Thursday 3rd July, 2008

Time	Boulevard 1	Boulevard 2	Boulevard 3	Boulevard 4	Crown Lager Bar	Board Room
8:45 – 9:00 am	Opening and Welcome Boulevard 3 & 4 Kidman & King					
9:00 – 10:30 am	Panel Discussion Boulevard 3 & 4. Tytler—Millar—Tobin Chair: Ritchie					
10:30 – 11:00 am	Morning Tea					
11:00 – 11:40 am	<p>Speaker: Prain & Waldrip Title: Framework for using representations for teaching and learning science <i>Chair: Tytler</i></p>	<p>Speaker: Chun-Ju Huang & Miao-Ju Jiang Title: To construct three styles of teaching models based on science news from theoretical perspective and Taiwan's situation <i>Chair: Yu-Kai Chan</i></p>	<p>Speaker: Dole, Wright, Clarke, Hilton, Roche Title: Assessing the impact of professional development programs through exploration of teacher knowledge for teaching density <i>Chair: Zeegers</i></p>	<p>Speaker: Xu, Seah, Arnold & Clarke Title: Using videos in classroom research: A critical reflection on fieldwork in two secondary classrooms <i>Chair: Wen-Hua</i></p>	<p>Speaker: Ferry Title: A case for applying key aspect of cognitive load theory to the teaching of science <i>Chair: Hoban</i></p>	<p>Speaker: Hsin-Chung Ting Title: Exploring senior high school students' decision-making in socioscientific issues: The role of students' information preference and reasoning <i>Chair: Richard Cooper</i></p>
11:45 – 12:25 pm	<p>Speaker: Hubber, Tytler & Haslam Title: Yr 7 students' understanding of force as a representational issue: Insights from a classroom video study <i>Chair: Prain</i></p>	<p>Speaker: Palmer Title: Hands-on inquiry in middle primary school <i>Chair: Appleton</i></p>	<p>Speaker: Miao-Li Changlai & Kun-Yuan Yang Title: The Effects of problem-based learning of the Biodiversity Unit for non-science major college students <i>Chair: Hsin-Chung Tin</i></p>	<p>Speaker: Arnold Title: An analysis of student identity as performative in a middle school science classroom <i>Chair: Sammel</i></p>	<p>Speaker: Kenny Title: Pre-service teachers and in-service teachers working together to teach primary science <i>Chair: Satterthwait</i></p>	<p>Speaker: Hao-Jan Lee & Shian Leou Title: The belief changes of Taiwan's pre-service teachers by questioning to improve reflection <i>Chair: Isaacs</i></p>
12:30 – 1:10 pm	<p>Speaker: Tytler, Prain, Hubber & Haslam Title: Teaching and learning adaptation at Yr 5/6 from a representational perspective <i>Chair: Waldrip</i></p>	<p>Speaker: Wilson Title: Science education for disengaged youth: Developing a framework for best practice <i>Chair: Preston</i></p>	<p>Speaker: Chamrat, Yutakom & Thomson Title: Enhancing Tai grade 10 students' understanding of atomic structure concepts and the nature of science through a model-based approach <i>Chair: Danaia</i></p>	<p>Speaker: Xu & Clarke Title: Student learning about density: What makes it so difficult? <i>Chair: Dole</i></p>	<p>Speaker: Rennie Title: The promotion of scientific and technological literacies through school-community links <i>Chair: Griffin</i></p>	<p>Speaker: Shu-Nu Chang Title: Modelling non-science major's modelling ability</p>
1:00 – 2:00 pm	Lunch					
2:00 – 2:40 pm	<p>Speaker: Shiang-Yao Liu & Hsin-Chung Ting Title: Interplay between content knowledge and scientific epistemological beliefs in reasoning on</p>	<p>Speaker: Tomas & Ritchie Title: The challenges of assessing scientific literacy in a writing-to-learn context: Is the proof</p>	<p>Speaker: McKinnon & Danaia Title: Teaching primary pre-service teachers to teach science in PBL learning environments</p>	<p>Speaker: Shu-Fen Lin, Wen Hua Chang, Yeong-Jing Cheng & Jia-Jia Hsu Title: A survey of teachers' guides for</p>	<p>Speaker: Ya-Ying Lin, Chin-Fei Huang & Chin-Hsiang Fang Title: A study of the creative experiment teaching by a Taiwan</p>	<p>Speaker: Preston Title: Factors affecting primary children's interpretation of science diagram <i>Chair: Wilson</i></p>

	socioscientific issues <i>Chair: Houn-Lin Chiu</i>	always in the pudding? <i>Chair: Hackling</i>	<i>Chair: Paige</i>	science teachers <i>Chair: Rahmawti</i>	high school chemistry teacher. <i>Chair: Yutakom</i>	
2:45 – 3:25 pm	Speaker: Hickey & Whitehouse Title: Taking science public: On-line and on-oval learning with preservice teachers <i>Chair: Tan</i>	Speaker: McDermott & Hand Title: The impact of embedding multiple modes of representing information in writing-to-learn activities on student construction of chemistry knowledge <i>Chair: Tomas</i>	Speaker: Hilton, Nichols & Gritsaki Title: Using digital resources to scaffold chemistry students' learning during laboratory investigations <i>Chair: Chun-Ju Huang</i>	Speaker: Mun Fie Tsoi Title: Designing for multimedia learning: TSOI hybrid learning model <i>Chair: Chi-Chin Chin</i>	Speaker: Woolnough Title: Developing preservice teachers' science PCK using content representations <i>Chair: Palmer</i>	Speaker: Hye-eun Chu, Yeo, Zadnik & Treagust Title: Students' difficulty in understanding of fundamental thermodynamic concepts in everyday contexts <i>Chair: Shiang-Yao Liu</i>
3:30 – 4:10 pm	Speaker: Appleton Title: Pre-service primary science teacher education: A pedagogical content knowledge perspective <i>Chair: Woolnough</i>	Speaker: Graeber Title: Research on students' interest in chemistry and scientific literacy as the basics for PARSEL (Popularity And Relevance in Science Education for Scientific Literacy) <i>Chair: Hand</i>	Speaker: Chi-Chin Chin, Wei-Cheng Yang & Hsiao-Lin Tuan Title: Exploring the impact of integrating argumentation, reading and writing activities in a socioscientific issue on science learning of sixth graders <i>Chair: Mun Fie Tsoi</i>	Speaker: Chin-Cheng Chou & Li-Chi Chiu Title: Utilize the Galileo's thought experiment on falling bodies to analyse elementary school students' conceptual change <i>Chair: Hye-Eun Chu</i>	Speaker: Geelan Title: Science teacher explanatory frameworks: A Canadian video study <i>Chair :G. Hilton</i>	Speaker: Rahmawati & Koul Title: Students' perceptions of the chemistry laboratory environment at the higher education level in Indonesia <i>Chair: Rennie</i>
4:00 – 4:30 pm	Afternoon Tea					
4:30 – 5:10 pm	Speaker: Satterthwait Title: Building confidence in pre-service teachers for teaching primary science <i>Chair: Whithouse</i>	Speaker: Hilton Title: Awareness of target audience by student video producers in science <i>Chair: Kidman</i>	Speaker: Joung & Gunstone Title: Children's typically-perceived-situations of force and no force in the context of Australia and Korea <i>Chair: Kim</i>	Speaker: Houn-Lin Chiu, Chia-Ju Liu & Shorn-Li Chen Title: The impact of science teachers' mental states on students' learning the unit of acid and base <i>Chair: Chin-Chen Chou</i>	Speaker: Song, Kang, Kim, Jho, Ji & Cho Title: An analysis of the mismatches between participating groups in community-based science program called "everyday science class" <i>Chair: Christensen</i>	Speaker: Braimoh & Hackling Title: Junior secondary teachers' experiences of preparation for and transition to teaching in Lagos State, Nigeria <i>Chair: Tongchai</i>
5:15 – 5:55 pm	Speaker: Isaacs, Corrigan & Mitchell Title: Science curriculum resources: The interface between policy, research and practice <i>Chair: Graeber</i>	Speaker: Yoon, Choi, Kim & Jeon Title: Teaching in a gap between contemporary science and school science: An evaluation of advanced science teacher training program (ASTTP) in Korea <i>Chair: Joung</i>	Speaker: Wood & Lewthwaite Title: The development, validation and application of a science curriculum delivery evaluation questionnaire for indigenous Maori settings <i>Chair: Braimoh</i>	Speaker: Ya-Hui Lin, Wen-Hua Chang & Huey-Por Chang Title: Fourth graders' cognitive outcomes and perceptions of teachers' interactive behaviors in writing-to-learn classes <i>Chair: Houn-Lin Chiu</i>	Speaker: Christensen Title: Dealing with the uncertainty of contested science <i>Chair: Song</i>	Speaker: Kim Title: Kepler's discovery in eye vision perspective has been ignored in secondary school science teaching <i>Chair: Gunstone</i>

Friday 4th July, 2008

Time	Boulevard 1	Boulevard 2	Boulevard 3	Boulevard 4	Crown Lager Bar	Board Room
8:00 – 8:40 am	<p>Speaker: Howitt, Rennie, Heard & Yuncken Title: Evaluation of the scientists in schools pilot project <i>Chair: Kim</i></p>	<p>Speaker: Simon Title: Evidenced based professional learning for teaching argumentation in school science <i>Chair: Choi</i></p>	<p>Speaker: Yu-Wen Lin, Chia-Ju Liu & Tai-Chu Huang Title: Explore students' recognitive processes in graphical representation of biological concepts <i>Chair: Chin-Fei Huang</i></p>	<p>Speaker: Corrigan Title: Chemistry education to develop reflective practitioners <i>Chair: Cheung</i></p>		<p>Speaker: Woods Title: Reasons for high ability regional and rural girls decisions to enrol in senior secondary physics and intermediate mathematics <i>Chair: Panizzon</i></p>
8:45 – 9:25 am	<p>Speaker: Panizzon & Wright Title: Monitoring NSW teachers' perceptions and classroom practices around an assessment for learning agenda <i>Chair: Woods</i></p>	<p>Speaker: McDonald Title: Factors mediating the development of preservice primary teachers' views of nature of science <i>Chair: Watters</i></p>	<p>Speaker: Sheffield, Venville & Rennie Title: Issues related to shared leadership in a cross curricular science project <i>Chair: Millar</i></p>	<p>Speaker: Cheung Title: Improving the teaching and learning of chemical equilibrium in high schools <i>Chair: Bellocchi</i></p>		<p>Speaker: Danaia & McKinnon Title: Changes in the experiences, knowledge and perceptions of students in junior secondary science: Outcomes of an investigative astronomy program <i>Chair: Mulholland</i></p>
9:30 – 10:10 am	<p>Speaker: Chin-Fei Huang & Chia-Ju Liu Title: The influences of resource folio on novice science teacher's professional development in Taiwan <i>Chair I-Lin Hou:</i></p>	<p>Speaker: Song, Chung, Choi, Kim, Cho Title: How do we know how much society is scientifically literate? <i>Chair: Simon</i></p>	<p>Speaker: Mulholland Title: School children understanding the lunar phases: ASISTM school moon project 2007 <i>Chair: Howitt</i></p>	<p>Speaker: Bellocchi Title: Merged discourse: Hybrid language developed by students during analogy-writing activities in a chemistry class <i>Chair: Corrigan</i></p>	<p>Speaker: Yu-Kai Chen & Jeng-Fung Hung Title: Evaluating the scientific thinking skills of tenth grade students in an inquiry-based learning environment <i>Chair: Yoon</i></p>	<p>Speaker: Ireland Title: "Inquiry is... difficult to define!": Primary teachers conceptions of teaching science <i>Chair: B Palmer</i></p>
10:00 – 10:30 am	Morning Tea					
10:30 – 11:10 am	<p>Symposium Paper 1: Hoban & Ferry Title: Engaging secondary & primary preservice teachers in creating learner-generated animation (slowmations) as science</p>	<p>Speaker: Chung-Hsien Tseng, Hsiao-Lin Tuan, Chi-Chin Chin, Chung-Chieh Yu, Cheng-Chian Wu Title: How to help science teachers develop inquiry science teaching? Perceptions from teachers</p>	<p>Speaker: France Title: Parallel stories: Making links between science and science education <i>Chair: Sheffield</i></p>	<p>Speaker: Han Title: The weakness of coteaching in Korea <i>Chair: Treagust</i></p>	<p>Speaker: Fensham Title: Complexity theory: A next step for SSI education and research <i>Chair: Mulholland</i></p>	<p>Speaker: B. Palmer Title: T. H. Huxley and school physiography in Britain and America <i>Chair: Ketpichainarong</i></p>

	knowledge representation <i>Chair: Keast</i>	with successful experience <i>Chair: Chin-Fei Huang</i>				
11:15 – 11:55 am	Paper 2: Keast, Cooper, Berry & Loughran Title: Slowmation as a pedagogical tool for improving science learning <i>Chair: Hoban</i>	Speaker: Millar Title: Teaching ‘ideas about science’: Some reflections on the experience of <i>Twenty First Century Science</i> <i>Chair: Fensham</i>	Speaker: Otrrel-Cass, Cowie, Jones & Fester Title: Early lessons from the use of the New Zealand science learning hub website <i>Chair: Venville</i>	Speaker: I-Lin Hou & Chia-Ju Liu Title: The impacts of the nine-year integrated curriculum on students’ attitudes related to science in Taiwan <i>Chair: Dawson</i>	Speaker: Heap Title: How can we know what they know: Analysis tools to identify teachers’ understanding of the nature of science <i>Chair: McDonald</i>	Speaker: Hartley Title: Using science clubs to promote and develop science and technology education at rural schools in South Africa <i>Chair: Han</i>
12:00 – 12:40 pm	Speaker: Kidman Title: Biotechnology learnings using ‘claymation’ <i>Chair: Hartley</i>	Speaker: Tongchai, Sharma, Johnston & Arayathanitkul Title: The use of two-tier multiple choice questions in mechanical waves to diagnose students’ conceptions <i>Chair: Skamp</i>	Speaker: Lee & Song Title: A content analysis of entropy explained in introductory physics textbooks: Based on its historical development <i>Chair: Juntaraprasert</i>	Speaker: Robbins Title: The mediation of young children’s thinking about natural phenomena through conversation and drawing <i>Chair: Otrrel-Cass</i>	Speaker: Fawns, Mulhall, Redman & Toscano Title: Perspective talking in science education: Realism, and material lives in the space of reasoning <i>Chair: Heap</i>	Speaker: Chiaju Liua & Wenjin Kuo Title: Applying ERPs to explore proportional reasoning <i>Chair: Yu-Wen Lin</i>
12:30 – 1:30 pm	Lunch					
1:30 – 2:10 pm	Speaker: Hsuan-Ying Hsieh, Mao-Tsai Huang, Sang-Chong Lieu, Shu-Fen Lin, Sufen Chen, Wen-Hua Chang Title: Developing nature of science: Explicit professional development program <i>Chair: Chau</i>	Speaker: Birdsall Title: Exploring student teachers’ understanding of sustainability <i>Chair: Rebecca Cooper</i>	Speaker: Kanasa, Nichols, Wright & Geelan Title: “Should Australia grow GM crops?” Changes in the scientific literacy of middle year students, in relation to biotechnology, after completing an inquiry-based unit <i>Chair: Mulhall</i>	Speaker: Jobling, Chittleborough, Hubber, Haslam & Calnin Title: Effective teaching and learning in science using ICT and Web 2.0 <i>Chair: Lee</i>	Speaker: King Title: Learning in a context-based program: A dialectical socio-cultural perspective <i>Chair: Tobin</i>	Speaker: Show-Yu Lin, Chih-Ming Tu & Yeong-Jing Cheng Title: Exploring Taiwanese junior high school students’ conceptions of human nervous system <i>Chair: Chiju Liu</i>
2:15 – 2:55 pm	Speaker: Venville & Dawson Title: Argumentation about socioscientific issues in genetics contexts: does it improve conceptual understanding?	Speaker: Seah, Clarke & Hart Title: Towards the development of framework for analysing lexicogrammar in science classrooms <i>Chair: Shu-Fen Lin</i>	Speaker: Hume Title: Introducing reflective practice into pre-service teacher education to support the growth of pedagogical content knowledge in science	Speaker: Hung-Chih Yen, Hsiao-Lin Tuan & Chi-Hung Liao Title: Can motivation affect students’ conceptual change <i>Chair: Birdsall</i>	Speaker: Tobin Title: Using social and cultural lenses to transform science education <i>Chair: King</i>	Speaker: Ketpichainarong, Ruenwongsa, Panijpan, Honboontri & Coll Title: Using an inquiry-based cellulase enzyme laboratory to enhance students’ understanding of enzyme activity

	<i>Chair: Toscano</i>		<i>Chair: France</i>			<i>Chair: Hung-Chih Yen</i>
3:00 – 3:40 pm	<p>Speaker: MacIntyre Title: Enhancing pre-service student pedagogical content knowledge of the rock cycle using different representations <i>Chair: Hume</i></p>	<p>Speaker: Im, Kim, Kim & Cha Title: The influence of scientific hands-on activities including writing guided report upon the literacy and inquiry skills of hard-of-hearing and deaf students <i>Chair: Miao-Li Changlai</i></p>	<p>Speaker: Juntaraprasert, Roadrangka & Tippins Title: Social constructivist learning theory integration in science teaching: Analysing teacher's conceptual development and teaching practice <i>Chair: Kanasa</i></p>	<p>Tan, Treagust, Chandrasegaran, & Mocerino Title: Interplay between stoichiometry and kinetics: Interactions and interferences <i>Chair: Coll</i></p>	<p>Speaker: Milne Title: Beyond argument: Science education as connected and separate knowing <i>Chair: Fawns</i></p>	<p>Speaker: Paige Title: Reinvigorating pre service science education: Connecting fourth year primary/middle science and mathematics education students to place <i>Chair: McKinnon</i></p>
3:30 – 4:00 pm	Afternoon Tea					
4:00 – 5:00 pm	Annual General Meeting					
7:00 pm	Dinner					

Saturday 5th July, 2008

Time	Boulevard 1	Boulevard 2	Boulevard 3	Boulevard 4	Crown Lager Bar	
8:45 – 9:25 am	<p>Speaker: Chau & Treagust Title: Assessment of teachers' stages of concern regarding the group 4 experimental sciences project in the International Baccalaureate diploma program <i>Chair: Hao Jan Lee</i></p>	<p>Speaker: Chigeza & Whitehouse Title: An investigation of Torres Strait Islander middle school students' descriptions of energy and force – research conducted in a wholly Indigenous classroom <i>Chair: Mi-Ja Nam</i></p>	<p>Speaker: Mukherjee Title: Technology teaching tools in science classrooms – what's used and what makes it usable? <i>Chair: Jittam</i></p>	<p>Speaker: Burchill Title: Physics practical work. An exploration of teachers' perceptions <i>Chair: Robbins</i></p>		
9:30 – 10:10 am	<p>Speaker: Barton, Nichols, Freebody, van Bergen, Hedberg, van Rooy, Chan Title: Transforming the technologies and modalities of learning: Exploring pedagogy in senior biology practical settings <i>Chair: Chigeza</i></p>	<p>Speaker: Bao-Yuan Liu & Chia-Ju Liu Title: The conflict processing of picture recognition: An ERP's study</p>	<p>Speaker: Hackling, Prain & Peers: Title: Primary connections: Impacts on student learning <i>Chair: Rodrigues</i></p>	<p>Speaker: Coll & Harrison Title: Science teaching using analogies in senior schools: A research-based resource for teachers <i>Chair: Griffin</i></p>	<p>Speaker: Chia-En Fan & Wen-Hua Chang Title: Embedding pictorial assessment to enhance seventh graders' classification concept construction <i>Chair: Bao-Yuan Liu</i></p>	
10:00 – 10:30 am	Morning Tea					
10:30 – 11:10 am	<p>Speaker: van Rooy Chan, Freebody, Hedberg, van Bergen, Nichols & Barton Title: Technologies and modalities of learning and teaching biology for senior high school students in NSW: Lesson exemplars of current practice <i>Chair: Whitehouse</i></p>	<p>Speaker: Joyce Title: Finding our way through the fog: Understanding the water cycle <i>Chair: Bull</i></p>	<p>Speaker: Hand, Norton-Meier, Gunel, Akkus Title: Teaching in the service of learning: A 3-year study of embedding authentic language and science practices within elementary science classrooms <i>Chair: Crowley</i></p>	<p>Speaker: Liangkriilas, Yutakom & Juntawong Title: Alternative conception of cellular respiration of Thai high school students <i>Chair: Hsuan-Ying Hsieh</i></p>	<p>Speaker: Jittam, Sriwattanaarhothai, Ruenwongsa, Panijpan, Hongboontri & Coll Title: Using the learning cycle to enhance Thai undergraduate university students' understanding of enzyme kinetics <i>Chair: Chia-En Fan</i></p>	
11:15 – 11:55 am	<p>Speaker: Fitzgerald, Hackling & Dawson Title: Beliefs, knowledge and practices of effective primary</p>	<p>Speaker: Bull Title: Keeping it complex – engaging critically with ideas about the water cycle</p>	<p>Speaker: Sangpradit & Roadrangka Title: A study of teaching and learning the concept of light by eighth</p>	<p>Speaker: Mi-Ja Nam, Heesook Yoon, Dae Hong Jeong & Hee K. Chae Title: Comparison</p>	<p>Speaker: Pei-Ying Tsai & Wen-Hua Chang Title: Seventh graders' critical understanding of reproduction related news</p>	

	science teachers <i>Chair: Ireland</i>	<i>Chair: Joyce</i>	grade science teachers in schools under the Bangkok Metropolitan Administration. <i>Chair: Bongkotphet</i>	between textbooks' description and teacher's conception of chemical rates and improvement of an experiment condition on the reaction between HCl (aq) and Mg (s) <i>Chair: Hickey</i>	<i>Chair: Shu-Fen Lin</i>	
12:00 – 12:40 pm	Speaker: Rudeenutthasarp, Panacharoensaward, Viravaidhaya & Yutakom Title: Exploring grade 10 students' concepts of mechanical equilibrium physics <i>Chair: Sangpradit</i>	Speaker: Jones Title: Collaborative partnerships: A model for science professional learning and science teacher education <i>Chair: van Roy</i>	Speaker: Rodrigues Title: Podcasting in primary science: Exploring primary 4-5 children's language in verbally reported knowledge construction <i>Chair: Mukherjee</i>	Speaker: Meichun Lydia Wen Title: Domain-general and domain specific science epistemological beliefs between senior high school students and college science students <i>Chair: Im</i>	POSTER PAPER Speaker: Jin-Su Jeong & Sung Gyu Yun Title: Visually impaired high school students' understandings of the structures and the functions of the human eye components	
12:30 – 1:30 pm	Lunch					
1:30 – 2:10 pm	Speaker: Crowley & Treagust Title: Problems of the last opportunity to learn biology at school: Making life decisions based on an incomplete and superficial understanding of genetics <i>Chair: Fitzgerald</i>	Speaker: Griffin & Aubusson Title: High support—high challenge—high learning: A science techno-museum project <i>Chair: Thrupp</i>	Speaker: Cox Title: Gendered science choices at the end of secondary schooling — Does differential enrolment lead to differential performance? <i>Chair: Arnold</i>	Speaker: Sammel & Cooper Title: The doing of pre-service primary science teacher education after 'Sorry' <i>Chair: Pei-Ying Tsai</i>		
2.15 – 2.55 pm	Speaker: Kurup & Hackling Impact of a professional learning intervention on preservice primary teachers' knowledge of and confidence to teach about global warming <i>Chair: Cox</i>	Speaker: Bongkotphet & Roadrangka Title: Thai elementary teachers' knowledge of inquiry teaching in astronomy <i>Chair: Lewthwaite</i>	Speaker: Wen-Hua Chang Title: Attitudes towards science and views on the nature of science of secondary students and teacher candidates <i>Chair: Rudeenutthasarp</i>			
2.50 – 3.20pm	Afternoon Tea					