

The 1st International Workshop on Advanced Learning Sciences (IWALS 2013)

PENNSYLVANIA STATE UNIVERSITY



COLLEGE of EDUCATION



The 1st International Workshop on Advanced Learning Sciences (IWALS 2013)

Organizers

Pennsylvania State University (PSU)

National Taiwan Normal University (NTNU)

Co-organizers

College of Education, PSU

The Advanced Center for the Study of Learning Science, NTNU

Workshop Committees

Honorary Chair

Michael ADEWUMI, Vice Provost for Global Programs (PSU)

Tung-Tai LIN , Vice President (NTNU)

Workshop Chair

Professor David H. MONK (PSU)

Workshop Co-Chair

Professor Ping LI (PSU)

Professor Yao-Ting SUNG (NTNU)

Date: 2013/10/21~2013/10/22

Venue: Mt. Nittany Room, Nittany Lion Inn, PSU

The 1st International Workshop on Advanced Learning Sciences (IWALS 2013)

Agenda

Day 1	
Time	Activity
08:30 – 09:30	Registration
09:30 – 09:50	Opening Ceremony Welcome/Opening Speech Professor David H. MONK (Workshop Chair, Dean, Pennsylvania State University) Professor Michael ADEWUMI (Workshop Honorary Chair, Vice Provost for Global Programs, Pennsylvania State University) Professor Tung-Tai LIN (Workshop Honorary Chair, Vice President, National Taiwan Normal University)
09:50 – 10:10	Professor Yao-Ting SUNG (Workshop Co-Chair, Dean, National Taiwan Normal University) Introduction to the Advanced Center for the Study of Learning Sciences
10:10 – 10:30	Tea Break
10:30 – 11:10	Keynote Speech Chair Professor Michael ADEWUMI Professor Ovid J. L. TZENG (Academia Sinica) Orthographic Variation and the Reading Brain

11:10 – 12:00	<p>Section 1 Neuroscience Approaches</p> <p>Chair Professor Jun Ren LEE</p> <p>PSU: Professor Ping LI Brain Sinatures of L1 and L2 Lexical Representation and Acquisition</p> <p>NTNU: Prof. Hsueh-Chih CHEN Prof. Jon-Fan HU (National Cheng Kung University) The Phonological and Orthographic Processes in L1 & L2 Language Acquisition: fMRI-based and Corpus-based Approach</p>
12:00 – 13:30	<p>Lunch</p>
13:30 – 14:10	<p>Section 2 Psycholinguistic Approaches</p> <p>Chair Professor Hsueh-Chih CHEN</p> <p>PSU: Professor Janet van HELL Lexical and Sentence Processing in Novice L2 Learners: Psycholinguistic and Neurocognitive Investigations</p> <p>NTNU: Professor Jun Ren LEE/ Rose LEE Character/Vocabulary Learning in L1 and L2 Learners</p>
14:10 – 14:50	<p>Section 3 Computational Linguistics Approaches (I)</p> <p>Chair Professor Jim LANTOLF</p> <p>PSU: Professor Hoi SUEN The Role and Current Methods of Peer Assessment in Massive Open Online Courses</p> <p>NTNU: Professor Yao-Ting SUNG Linguistic Features Analyses for Automated Readability Evaluation and Essay Scoring</p>
14:50 – 15:10	<p>Tea Break</p>

15:10 – 15:50	<p>Section 4 Computational Linguistics Approaches (II)</p> <p>Chair Professor C. Lee GILES</p> <p>PSU: Professor David REITTER Speaker Alignment and Task Success in Natural Language Processing</p> <p>NTNU: Professor Yuen-Hsien TSENG Natural Language Processing: Focus on Chinese/English Error Detection for Second Language Learning</p>
15:50 – 16:30	<p>Section 5 Corpus-based Approaches</p> <p>Chair Professor Jia-Fei HONG</p> <p>PSU: Professor Xiaofei LU Automatic Assessment of L2 Lexical and Syntactic Complexity</p> <p>NTNU: Professor Howard Hao-Jan CHEN Analyzing CSL and ESL Errors by Comparing Native and Learner Corpora</p>
16:30 – 17:10	<p>Section 6 Online and Virtual Learning</p> <p>Chair Professor Ping Li</p> <p>PSU: Professor Gloria CLARK Second Life as a Virtual Environment for Learning Spanish as a Second Language</p> <p>NTNU: Professor Yu-Ju LAN The Study of the Effects of Learning Contexts on Chinese Vocabulary Learning by American Students</p>
End of the First Day	

Day 2	
Time	Activity
08:30 – 09:00	Registration
09:00 – 09:40	<p>Keynote Speech</p> <p>Chair Professor Ovid J. L. TZENG</p> <p>Professor Charles A. PERFETTI (University of Pittsburgh and Pittsburgh Science of Learning Center)</p>
09:40 – 10:20	<p>Section 7 Language Teaching Research</p> <p>Chair Doctor I-Fang WANG</p> <p>PSU: Professor Matthew POEHNER NTNU: Professor Ya-Hsun TSAI Developing Teachers in Difffluence of Chinese Language and Character-based Teaching</p>
10:20 – 10:40	Tea Break
10:40 – 11:20	<p>Section 8 Learning Assessment Research</p> <p>Chair Professor Po Hsi CHEN</p> <p>PSU: Professor Bonnie MEYER Improving Reading Comprehension by Teaching the Structure Strategy in Schools</p> <p>NTNU: Professor Hak Ping TAM Assessing Scientific Literacy Among University Students</p>

11:20 – 11:40	General Discussion Chair Professor David H. MONK Professor Yao-Ting SUNG
11:40 – 12:00	MOU & Closing Ceremony Professor Michael ADEWUMI , Vice Provost for Global Programs (PSU) Professor David H. MONK, Dean College of Education, PSU Professor Tung-Tai LIN, Vice President, NTNU
End of the Second Day	

The Advanced Center for the Study of Learning Sciences

Funded by the Taiwan National Science Council, National Taiwan Normal University (NTNU) and Penn State University (PSU) have established a joint research center - the Advanced Center for the Study of the Learning Sciences. This center emphasizes theoretical and practical research on language learning (L1 and L2) and science learning using both behavioral and neuroimaging studies. Specifically, the three main research tracks of this joint center include language learning sciences, science learning and learning technology. From its strategic alliances with other world class universities, this center would carry out international integrated projects to explore issues regarding learning sciences and hence to form the basis of fundamental research in the area of learning sciences.

NTNU is the most prestigious historically Chinese learning institution in Taiwan. Its CSL/CFL course materials have been widely-used by renowned universities worldwide. The Test of Chinese as a Foreign Language (TOCFL) established by NTNU has been implemented in over 20 countries. NTNU has been also aiming to create a substantial range of word class high-tech on-line learning platforms to enable the advance of automatic marking/analyzing systems for Chinese writing and speaking. In addition, the newly advanced Educational NeuroCognitive Laboratories at NTNU stresses on exploring the fundamental cognitive mechanisms underlying language learning through the employment of eye-tracker, ERP and fMRI.

NTNU's Science Learning Team has made significant achievements in exploring effective learning in the context of technology-driven learning environment. The team has also developed various intelligent systems, such as somatosensory, speech/face recognition technologies, which could be incorporated into teaching and learning activities in the Smart Classroom 2.0. Hence, the Smart Classroom 2.0 would be able to provide real-time detection and a record of teaching and learning programs in class.

The development of technology-mediated Smart Classroom 2.0 learning environment and the Technological Pedagogical Content Knowledge (TPCK) teacher education system would strengthen students' scientific reasoning and argumentation abilities and enhance their overall scientific literacy. Moreover, through the collaboration with PSU, indicators of teacher's development in TPCK will be constructed. Based on the TPCK indicators, innovative teaching and teacher education models will be developed to build teachers' capacity to effectively implement science teaching techniques in the Smart Classroom 2.0.

Learning technology is regarded as the core technique of this project and the

foundation of the prospective application. To develop technologies involved in language learning, NTNU focuses on the development of three core techniques including language learning technology, science learning technology, and education cloud. The development of natural language processing for automatic Chinese essay scoring, speech signal processing for listening and speaking, and the Artificial Neural Network for readability has been completed and achieved word-class standards. The joint center also aims to become a global e-Learning center to facilitate collaborations among industries, academia and the government. This center would take advantage of its existing achievements in Mandarin learning and teacher education and incorporate marketing strategies and the cloud computation technology to develop a language learning system, which would be expected to largely increase the value of Mandarin industries in world-wide markets.

The joint center would make a substantial contribution to the establishment of world class Chinese learning and instruction industries by bringing together research resources from NTNU and PSU, by collaborating with relevant research institutions in Asia, Europe and the United States, and by combining the existing achievements in teacher preparations and the advance of cloud technology. The ultimate goal is to develop into a top transnational research center which enables interdisciplinary collaborations to take place, and most importantly, to promote Chinese learning all over the world.