PRE-CONFERENCE WORKSHOPS

Workshop W01  Natural Language Processing Techniques for Educational Applications (NLP-TEA), with a Shared Task on Grammatical Error Diagnosis for Learning Chinese as a Foreign Language (CFL)

The aim of this mini-conference-style workshop is to provide a forum where international participants can share knowledge on the computer-assisted language learning. For the past decade, research and development in the NLP (Natural Language Processing) community has advanced NLP techniques for educational applications. For example, the NLP community in North America organizes a series of workshops on Innovative Use of NLP for Building Educational Applications (BEA) to improve existing capabilities and to generate creative ways to use NLP in educational applications for writing, reading, assessment, and so on. The previous BEA workshops were in conjunction with promotive conferences in NLP area (either ACL or NAACL HLT).

In addition to research papers in the above workshops, several shared tasks were also organized, e.g. “Helping Our Own” (HOO) English grammatical error detection/correction competitions in 2011 and 2012, and Native Language Identification (NLI) competitions in 2013. Independent of the series of BEA workshops, the CoNLL-2013 shared task is on grammatical error correction for learners’ English as a Foreign Language (EFL). In addition, there is a SemEval shared task on student’s response analysis. All of these competitions will increase the visibility of educational application research in the NLP community.

The ICCE 2014 in Japan will provide an ideal opportunity to bring together again influential as well as aspiring researchers in computer education area, to deliberate and interact on a range of research issues. The purpose of this workshop is to identify challenging problems facing the development of computer-assisted techniques for Asian language learning, and to shape future research directions through the publication of high quality, applied and theoretical research findings. To better meet this end, we also hold a competitive shared task on Grammatical Error Diagnosis, this year, for Learning Chinese as a Foreign Language (CFL).

VENUE, DATE and TIME

CONFERENCE ROOM 2, NOVEMBER 30 (SUNDAY), 13:30-17:00

WORKSHOP ORGANIZERS

Yuen-Hsien TSENG, National Taiwan Normal University, Taiwan
Hsin-Hsi CHEN, National Taiwan University, Taiwan
Yuji MATSUMOTO, Nara Institute of Science and Technology, Japan

WORKSHOP URL

https://sites.google.com/site/nlptea1/

ACCEPTED PAPERS

W01-01
A Sentence-Pattern Learning Support System for Japanese
Takahiro OHNO, Ayato Inoue, Dongli HAN
W01-02
CYCCDC: A Chiayi Chinese Conversation Dialogue Corpus
Jui-Feng YEH, Yun-Yun LU, Yi-Syun TAN

W01-03
Partial and Synchronized Caption Generation to Develop Second Language Listening Skill
Maryam Sadat MIRZAEI, Yuya AKITA, Tatsuya KAWAHARA

W01-04
Challenges in the Annotation of Article Errors in Spanish Learner Texts
María del Pilar VALVERDE IBAÑEZ

W01-05
Tools for Supporting Language Acquisition via Extensive Reading
Alexandra UITDENBOGERD

W01-06
Overview of Grammatical Error Diagnosis for Learning Chinese as a Foreign Language
Liang-Chih YU, Lung-Hao LEE, Li-Ping CHANG

W01-07
KNGED: a Tool for Grammatical Error Diagnosis of Chinese Sentences
Tao-Hsing CHANG, Yao-Ting SUNG, Jia-Fei HONG, Jen-I CHANG

W01-08
Extracting a Chinese Learner Corpus from the Web: Grammatical Error Correction for Learning Chinese as a Foreign Language with Statistical Machine Translation
Yinchen ZHAO, Mamoru KOMACHI, Hiroshi ISHIKAWA

W01-09
Detecting Grammatical Error in Chinese Sentence for Foreign
Jui-Feng YEH, Yun-Yun LU, Chen-Hsien LEE, Yu-Hsiang YU, Yong-Ting CHEN

W01-10
Grammatical Error Detection with Limited Training Data: The Case of Chinese
Marcos ZAMPIERI, Liling TAN

W01-11
Description of NTOU Chinese Grammar Checker in CFL 2014
Chuan-Jie LIN, Shao-Heng CHAN
In response to the emerging research diversity, the SIG on Development of Information and Communication Technology in the Asia Pacific Neighbourhood—DICTAP is organising a workshop on ICT Trends in Emerging Economies. The developmental growth of ICT in the Asia Pacific countries has been phenomenal in recent years as the Government of these countries have embarked on various ICT initiatives. Despite these efforts, the ICT development rate of each country has not been the same among countries from the low-income, lower-middle-income and upper-middle-income economies within the Asia Pacific region (hitherto referred to as emerging economies).

In general, the ICT growth in these countries is only at the emerging or development stage. The workshop invites contributions from researchers who are from emerging economies or those who are working on issues related to emerging economies to share scholarly findings and professional insights in ICT development in the field of education.

VENUE, DATE and TIME

CONFERENCE ROOM 1, DECEMBER 1 (MONDAY), 09:00-1700

WORKSHOP ORGANIZERS
Ahmad Fauzi Mohd AYUB, University Putra Malaysia, Malaysia
Muhammad LUKMAN, University of Muhammadiyah Prof. Dr. Hamka, Indonesia
Mas Nida Md KHAMBARI, University Putra Malaysia, Malaysia

WORKSHOP URL
https://sites.google.com/site/wicttee2014/

ACCEPTED PAPERS

W02-01
Harnessing ICT for Educational Development in Emerging Developing Countries within the Asia-Pacific Region
Mas Nida MD KHAMBARI, Ahmad Fauzi Mohd AYUB, Mohammad LUKMAN

W02-02
Learning and Affect Trajectories Within Newton’s Playground
Juan Miguel L. ANDRES, Ma. Mercedes T. RODRIGO

W02-03
Assessing Organizational Support and System Characteristics of Learning Management System: Views from Malaysian Higher Education Undergraduate Student
Sousan BALEGHI ZADEH, Ahmad Fauzi MOHD AYUB, Rosnaini MAHMUD, Shaffee MOHD DAUD

W02-04
Exploring Deep Approach to Learning for Accounting through ICT-Supported Learning Environment in Malaysian Secondary Schools: A Preliminary Study
Boon See TAN, Su Luan WONG
W02-05
Technology-enhanced Chemistry Learning and Students' Perceptions: A Comparison of Microcomputer-based Laboratory and Web-based Inquiry Science Environment
*Kulthida KAMTOOM, Niwat SRISAWASDI*

W02-06
The Design of Instructional Scaffolds to Facilitate Online Project-Based Learning
*Chun-Ping WU, Ching-Chiu YEH, Shu-Ling WU, Hao Jie YONG*

W02-07
GeMA ICT Learning Effectiveness in Improving Student Mathematical Ability
*Sigid Edy PURWANTO, Wahidin, Aidiyah Novian NISYAH*

W02-08
The Effectiveness of Association Picture Media Applications in Katakana Letter Reading Comprehension of Grade Ten Students at SMK Manajemen (Vocational Management School, Jakarta)
*Restoe NINGROEM, Endy SJAIFUL ALIM*

W02-09
An Online Survey: Studying the Antecedents of Technology Use Through the UTAUT Model Among Arts and Science Undergraduate Students
*Priscilla MOSES, Tiny Chiu Yuen TEY, Phaik Kin CHEAH, Timothy TEO, Su Luan WONG*
Computer-supported visualization, models and simulations are external representations on computers that can augment human cognition and communication. Rapid advances in technology make these innovative forms of representations available in educational settings to facilitate learning. For example, computer visualizations allow students’ access to unseen processes and abstract concepts that are otherwise difficult for teachers to depict. These external representations can mediate students to form their mental model of a given concept or phenomenon. Equally important, engaging students in creating, testing, critiquing and revising computer representations, collaboratively or individually, can be an effective instructional strategy that promotes productive learning and coherent understanding of the subject area. Success of computer-supported visualization, modeling and simulations in classrooms depends on many factors, including learners’ prior knowledge, experience, or ability, learners’ strategies, collaboration, and interactions with the representation, and learning processes guided by the learning environment. Studies are needed to identify promising principles, patterns, and design criteria that exploit the affordances of computer-supported visualization, modeling, and simulations and make them effective for learning.

In this workshop, a variety of topics and research issues related to computer-supported visualization, modeling, and simulations for learning in all different subject areas will be explored. The aim of this workshop is to provide a forum in which international participants can exchange ideas and share recent developments in visualization, modeling and simulations for learning. We hope to stimulate fruitful discourse among researchers and further encourage the use of innovative technology or application of adequate research methodology for moving forward the research of computer-supported visualization, modeling, and simulations.

VENUE, DATE and TIME

CONFERENCE ROOM 2, NOVEMBER 30 (SUNDAY), 09:00-12:30

WORKSHOP ORGANIZERS

Hsin-Yi CHANG, National Kaohsiung Normal University, Taiwan
Silvia Wen-Yu LEE, National Changhua University of Education, Taiwan

WORKSHOP URL

https://sites.google.com/site/cvmsicie2014/

ACCEPTED PAPERS

W03-01
Equipping High School Students with the Abilities of Evaluating Evidence and Formulating Evidence for an on-line Decision-making Task
Shu-Sheng LIN, Ying-Shao HSU

W03-02
An Investigation of Relationships between Biology Attitudes and Perceptions toward Instructional Technology in Analogy-based Simulation on Light Reaction
Sarunya PINATUWONG, Niwat SRISAWASDI

W03-03
Visual Behavior and Cognitive Load in Augmented Reality Learning Environment
Wei Yan LIN, Meng-Jung TSAI, An-Hsuan WU

W03-04
Visual Behavior and Cognitive Load on E-book Vocabulary Learning
An-Hsuan WU, Po-Fen HSU, Hui-Jou CHIU, Meng-Jung TSAI

W03-05
Incorporating augmented reality into learning practical skills for medical surgery
Ying-Shao HSU, Yuan-Hsiang LIN, Beender YANG, Shih-Fan YANG, Ya-Yen CHAN, Zi-Hao LIN, Yi-Sheng CHAN

W03-06
Path Analyses of How Students Develop Conceptual Knowledge and Inquiry Skills in a Simulation-Based Inquiry Environment
Hsin-Yi CHANG, Ying-Shao HSU, Hsin-Kai WU, Chih-Ming CHEN

W03-07
Understanding middle and high school students' views of model evaluation and model change
Silvia Wen-Yu LEE, Hsin-Kai WU, Hsin-Yi CHANG
<table>
<thead>
<tr>
<th>Workshop W04</th>
<th>The 3rd Workshop on application of innovative educational technologies in STEM education</th>
</tr>
</thead>
</table>

STEM education and educational technology are two growing research fields both with great potential. The studies in the application of innovative educational technologies in STEM education can facilitate the integration of theories and practices in STEM education and educational technologies, and provide insights into the use of innovative educational technologies to help learners’ learning outcomes derived from STEM education. This workshop aims to provide an interactive channel for interdisciplinary researchers, teachers, and software developers to present short papers, to communicate and discuss with one another on relevant issues regarding the application of innovative educational technologies in STEM education.

In ICCCE 2012 and ICCE2013, the 1st and 2nd workshops on application of innovative educational technologies in STEM education were held successfully. The value of the workshop was recognized and received widely positive feedbacks from the participants. They suggest and continue to appeal for more workshop series. We believe ICCE 2014 participants will get interested in this issue, and those researchers who had relevant experience of this issue can also share and interact with one another in this workshop.

VENUE, DATE and TIME

CONFERENCE ROOM 3, DECEMBER 1 (MONDAY), 09:00-12:30

WORKSHOP ORGANIZERS

Huei-Tse HOU, National Taiwan University of Science and Technology, Taiwan
Ying-Tien WU, National Central University, Taiwan

WORKSHOP URL

http://140.118.56.80/ICCEWS_STEM2014/

ACCEPTED PAPERS

W04-01
Bio Detective: Student science learning, immersion experience, and problem-solving patterns
Mei-En HSU, Meng-Tzu CHENG

W04-02
The effect of students’ effectiveness and attitude in heterogeneous and free grouping cooperative learning applied in sixth-grade students’ Scratch program teaching
Lei CHEN, Xiuyu YANG, Xintong WANG, Feng-kuang CHIANG

W04-03
Designing Mobile Application for STEM: Building Individual Interest and Supporting Creative and Innovative Thinking Skills
Ilker YENGIN

W04-04
The Development and Evaluation of an Educational Game- Shimmer© with Computer Visualization for Optics Learning
W04-05
A Three-Stage Augmented-Reality-Facilitated Earth Science Instructional Process for Dispersing Learning Style Differences
Chang-Hwa WANG, Cheng-Ping CHEN

W04-06
The Effects of AR-based Instruction on Students’ Learning Performance, Motivation and Self-efficacy in Programming Learning
Gloria Yi-Ming KAO, Cheng-An RUAAN

W04-07
Implementation of Student-associated Game-based Open Inquiry in Chemistry Education: Results on Students' Perception and Motivation
Keeratika MEESUK, Niwat SRISAWASDI

W04-08
The Development and Evaluation of the Online Science Fair Inquiry System based on Scaffolding Design
Li-jen WANG, Chien-yu, CHENG, Chiu-ming, HU, Ying-Tien WU

W04-09
The difference in Sudoku puzzle-solving ability between undergraduates and postgraduates
Hong-Mei HU, Ling-Jin LI, Li-Sha WANG, Feng-Kuang CHIANG

W04-10
Investigating the role of self-explanation and co-explanation in 4th graders’ game-based science learning
Chung-Yuan HSU, Hung-Yuan WANG, Shih-Hsuan WEI
The increasing amount of data generated in digital learning contexts provides opportunities to benefit from learning analytics as well as challenges related to interoperability, privacy, and pedagogical and organizational models. As a consequence, new methodologies and technological tools are necessary to analyse and make sense of these data and provide intelligent and personalized scaffolding and services to stakeholders including students, faculty/teachers and administrators, as well as parents. Pedagogical and organisational models must also be incorporated in order to take advantage of the intelligent and personalized scaffolding and services to ensure productive learning and teaching.

In addition, access to data from different sources raises a number of concerns related to data sharing and interoperability, and protection of privacy for individuals and business interests for institutions.

The objective of the workshop is to gather researchers as well as stakeholders, including educational technologists, researchers, and practitioners who are involved in the analysis and deployment process and to increase awareness of learning analytics in the APSCE community.

We call for papers that cover technical, theoretical, pedagogical, as well as organisational issues in learning analytics. Through this workshop we aim to provide the participants with an overview of the state-of-art in this domain, from a national, regional or organisational / institutional perspective.

VENUE, DATE and TIME

CONFERENCE ROOM 4, DECEMBER 1 (MONDAY), 09:00-12:30

WORKSHOP ORGANIZERS

Wei Qin CHEN, Oslo and Akershus University College of Applied Sciences, Norway
Tore HOEL, Oslo and Akershus University College of Applied Sciences, Norway
Jon MASON, Charles Darwin University, Australia
Kenji HIRATA, University of Tokyo, Japan
Yong-Sang CHO, Korean Education and Research Information Service, South Korea
Jin Gon SHON, Korea National Open University, South Korea

WORKSHOP URL

https://sites.google.com/site/la2014ws/

ACCEPTED PAPERS

W05-01
Preliminary Requirements Analysis towards an Integrated Learning Analytics System
*Byung-gi CHOI, Yong-sang CHO, Jaeho LEE*

W05-02
Learning Analytics Interoperability – looking for Low-Hanging Fruits
*Tore HOEL, Wei Qin CHEN*

W05-03
Making Sense of Online Learning Behavior: A Research on Learning Styles and Collaborative Learning Data
How can Learning Analytics fit into a General Evaluation Framework and already be addressed during Learning Design?

Christian M. STRACKE

Learning Analytics Data Items on Digital Textbooks

Yasuhisa Tamura

Learning Analytics: An Enabler for Dropout Prediction

Shu-Fen TSENG, Chih-Yueh CHOU, Zhi-Hong CHEN, Po-Yao CHAO
Emerging Pedagogies for Computer-based Learning

With the rapid growth in field of computer-based learning environments in the 21st century, pedagogy has been recognized as one of the mechanisms in the movement of computer-based teaching and learning. Therefore, the emerging pedagogies which are employed specifically with computer-based technologies are central part in the movement of educational reform. The WORKSHOP ON EMERGING PEDAGOGIES FOR COMPUTER-BASED LEARNING aims to provide a platform for educators, researchers, and developers to share scholarly interest, research, practice, and professional insight into pedagogies or particular instructional methods in context of computer-based teaching and learning

VENUE, DATE and TIME

CONFERENCE ROOM 3, NOVEMBER 30 (SUNDAY), 13:30-17:00

WORKSHOP ORGANIZERS

Niwat SRISAWASDI, Khon Kaen University, Thailand
Patcharin PANJABUREE, Mahidol University, Thailand

WORKSHOP URL

http://fest.kku.ac.th/ep4cbl/index.html

ACCEPTED PAPERS

W06-01
Motivation and Engagement in MOOC – Teachers’ Perspective  
Li Fern TAN, Kai Song GOH, Emile SABASTIAN

W06-02
Effects of Gender Differences and Learning Performance within Residence Energy Saving Game-based Inquiry Playing  
Ugyen DORJI, Patcharin PANJABUREE, Niwat SRISAWASDI

W06-03
A Blended Learning Environment in Chemistry for Promoting Conceptual Comprehension: A Journey to Target Students’ Misconceptions  
Sumarin NIROJ, Niwat SRISAWASDI

W06-04
Investigating Correlation between Attitude toward Chemistry and Motivation within Educational Digital Game-based learning  
Nattida NANTAKAEW, Niwat SRISAWASDI

W06-05
Development and preliminary evaluation of a knowledge management-based online teacher community platform for science fair instruction: A cluster analysis  
Chiu-Ming HU, Chao-Shen CHENG, Li-Jen WANG, Huei-Tse HOU, Yi-Chun KUO, Cheng Teng YAO, Ying-Tien WU
W06-06
An Evaluation of Macro-Micro Representation-based Computer Simulation for Physics Learning in Liquid Pressure: Results on Students’ Perceptions and Attitude
Jarunya BUYAI, Niwat SRISAWASDI

W06-07
Promoting Students’ Physics Motivation by Blended Combination of Physical and Virtual Laboratory Environment: A Result on Different Levels of Inquiry
Chakkrapan PIRAKSA, Niwat SRISAWASDI
Workshop The 7th Workshop on Modeling, Management and Generation of Problems/Questions in Technology-Enhanced Learning

Solving problems/questions is one of the most indispensable and important components in the teaching and learning process. Problems/questions with adequate quality in various testing conditions are believed to enable teachers to assess individual students’ capability and readiness of transfer in specific domain knowledge. Despite this, there are still many areas in need of systematic investigation to promote knowledge and skills on problems/questions-centered learning approach, including learning by problem solving and/or generation. For instance: what criteria constitute as adequate test item quality (in addition to frequently cited psychometric index like item difficulty, discrimination index); how to best assess learner’s capability with appropriate quality level within constrains (e.g., an optimal number of items, time limitation, etc.); any feasible metadata heuristics and/or techniques for problems/questions selection; any promising alternative strategies for compiling a sufficient amount of number of problems/questions; any scaffolding techniques for question-generation implementation and instructional diffusion and so on.

In ICCE2006, 2007, 2009, 2010, 2011, and 2013, we held a series of workshops where we paid special attention to “questions/problems” in technology-enhanced learning. This is the 7th workshop focusing on the same topic. This continuous workshop will provide a good and timely opportunity to present and share the results and issues about "problems/questions" in ICCE community. We cordially invite presenters and participants who are interested in further exploring the many facets and potential uses of "problems/questions" in education/learning from a technological, computational, pedagogical, psychometrics, theoretical, sociological and administrative point of views.

VENUE, DATE and TIME

CONFERENCE ROOM 2, DECEMBER 1 (MONDAY), 13:30-17:00

WORKSHOP ORGANIZERS

Fu-Yun YU, National Cheng Kung University, Taiwan
Tomoko KOJIRI, Kansai University, Japan
Tanja MITROVIC, University of Canterbury, New Zealand
Tsukasa HIRASHIMA, Hiroshima University, Japan
Kazuaoki KOJIMA, Teikyo University, Japan

WORKSHOP URL

http://web.ucgw.teikyo-u.ac.jp/~kojima/iccews

ACCEPTED PAPERS

W07-01
An Experimental Study on the Effects of an Online Student-Constructed Tests Learning Activity
Fu-Yun YU, Chia-Ling SU

W07-02
Exploring the Effects of Student Question-Generation Strategy
Chun-Ping WU, Shu-Ling WU, Ching-Chiu YEH

W07-03
Structured Explanation Generation for Conceptual Understanding in Physics
Tomoya HORIGUCHI, Takahito TOUMOTO, Tsukasa HIRASHIMA

W07-04
Practical Use of of Interactive Environment for Learning by Problem-posing posing for One-step Multiplication and Division Word Problems
Sho YAMAMOTO, Yuki AKAO, Mitsutaka MUROTSU, Takehiro KANBE, Yuta YOSHIDA, Kazushige MAEDA, Yusuke HAYASHI, Tsukasa HIRASHIMA

W07-05
Revealing Students' Thinking Process in Problem-Posing Exercises: Analysis of First Sentence Selection
Nur HASANAH, Yusuke HAYASHI, Tsukasa HIRASHIMA

W07-06
Balance Control of Question-Posing Focusing on Learning Target Words on the Self-Study Material Contribution and Sharing System
Toshihiro HAYASHI, Yuji HIRAI, Kazuhiro URA, Akihiro IWAKI, Rihito YAEGASHI, Hiroshi MURAI, Hiroyuki TARUMI
The development of advanced information technologies has opened up new opportunities in the area of computer supported learning environments. A key aspect of this work lies within the fact that students can access learning material at any time and any places. As a result of such convenience, a wide range of people have begun using computer supported learning environments for supporting instruction. Thus, it is important to ensure that such computer supported learning environments can accommodate diverse students’ needs.

To address this issue, it is necessary to incorporate personalization into the development of computer supported learning environments. Personalization is acknowledged as a useful approach to develop added value services in computer supported learning environments. It can help students with different characteristics, backgrounds and needs to get different types of content presentation and navigation support. In this context, a deep understanding of personalization is essential for the development of computer supported learning environments.

While acknowledging the essentiality of personalization, the importance of incorporating an element of collaboration during the process so that students can contribute to each other’s learning has become prevalent in educational practice with the advent of Web 2.0 technologies. Thus, issues on how to address these two aspects simultaneously if desirable, or at different learning stages to create optimal learning space and experience for involved learners are the focus of this workshop. In sum, this proposed workshop addresses two core aspects in computer supported learning environments—personalization and collaboration. The workshop provides opportunities for the cross-fertilization of knowledge and ideas from researchers in the many fields that make up this interdisciplinary research area. We hope that the implications of findings of each work presented in this workshop can be used to improve the development of Computer-Supported Collaborative and Personalized Learning environments.

VENUE, DATE and TIME

CONFERENCE ROOM 1, NOVEMBER 30 (SUNDAY), 09:00-17:00

WORKSHOP ORGANIZERS

Sherry Y. CHEN, National Central University, Taiwan
Gwo-Haur HWANG, Ling Tung University, Taiwan
Fu-Yun YU, National Cheng Kung University, Taiwan
Robin Chiu-Pin LIN, National Hsinchu University of Education, Taiwan

WORKSHOP URL

http://www.csclplicce2014.elt.nhcue.edu.tw/

ACCEPTED PAPERS

W08-01
Development of a Customized English Learning System based on Augmented Reality Technology
Gwo-Haur HWANG, Beyin CHEN, Hen-Lin HUANG

W08-02
Development of a Multi-Device Data Structures Course Item Bank Practice System with Self-Regulated Learning Strategy on Bloom’s Taxonomy of Educational Objectives  
Gwo-Haur HWANG, Jing-Fang CHEN, Yu-Ting SHIH, Yong-Sheng JHANG, Yi-Xuan LIN, Yu-Syuan WANG

W08-04
Students’ Self-efficacy and Acceptance toward Context-Aware Ubiquitous Learning in Biology Education: A Case of Photosynthesis in Plant  
Chuntanet NASARO, Niwat SRISAWASDI

W08-05
How Self-Efficacy Affects Students’ Performance and Pace in Self-Directed Learning with ICT  
Andrew C.-C. LAO, Mark C.-L. HWUNG, Oskar KU, Tak-Wai CHAN

W08-06
The Effects of Game-based Peer Response on Writing Quality: High-ability vs. Low-ability  
Jen-Hang WANG, Sherry Y. CHEN, Oskar KU, Tak-Wai CHAN

W08-07
The Effects of Mini-Games on Students’ Confidence and Performance in Mental Calculation  
Oskar KU, Denise H. WU, Andrew C. C. LAO, Jen-Hang WANG, Tak-Wai CHAN

W08-08
The Interface Design of Electronic Journals via Mobile Devices: A Cognitive styles Perspective  
Chu-Han CHAN, Sherry Y. CHEN

W08-09
Enhancing Metacognition through Weblog in Physics Classroom Thai Context  
Jirutthitikan PIMVICHAI, Chokchai YUENYONG, Sakanan ANANTASOOK

W08-10
Knowledge Propagation in Practical Use of Kit-Build Concept Map System in Classroom Group Work for Knowledge Sharing  
Toshihiro NOMURA, Yusuke HAYASHI, Takuma SUZUKI, Tsukasa HIRASHIMA

W08-11
The Exploration of Improving Efficiency of Synchronous Discussion: e-Case Live Show  
I-Fan LIU, Chun-Wang WEI

W08-12
Game playing as a strategy to improve Team Cohesion, support for collaborative U-Learning  
Pei-Yu CHENG, Wen-Yen WANG, Yueh-Min HUANG
### Workshop W09  
**The Applications of Information and Communication Technologies in Adult and Continuing Education**

Information and communication technologies (ICTs)—which include various forms of media, as well as new digital technologies such as computers and the Internet—have been recognized as potentially powerful enabling tools for educational use. When used appropriately, ICTs are expected to expand access to teaching and learning. Recently, the probable impacts of ICTs on adult education have been receiving much attention from educational researchers. Although the targeted areas of adult education may be diverse, such as higher education, teacher education or continuing education, researchers and practitioners have focused on the related issues in such fields, such as facilitating professional development, encouraging life-long learning, designing distance education programs, and other related issues.

However, a successful usage of ICTs is not always a simple thing to achieve, and it needs researchers and practitioners to scrutinize, plan, and implement it with caution. Therefore, this workshop will emphasize a wide spectrum of research or practical topics related to the usage of ICTs in enhancing adult education or continuing learning.

### VENUE, DATE and TIME

**CONFERENCE ROOM 3, NOVEMBER 30 (SUNDAY), 09:00-12:30**

### WORKSHOP ORGANIZERS

Jyh-Chong LIANG, National Taiwan University of Science and Technology, Taiwan  
Min-Hsien LEE, National Sun Yat-sen University, Taiwan

### WORKSHOP URL

[http://140.118.35.112/ICCE/ICCE2014/](http://140.118.35.112/ICCE/ICCE2014/)

### ACCEPTED PAPERS

**W09-01**  
The relationship between parents addicted to mobile phone and adolescent addicted to the Internet  
**Ying ZHOU, Xiao ZHANG, Jyh-Chong LIANG, Chin-Chung TSAI**

**W09-02**  
Developing an instrument to assess teachers’ belief, confidence and motivation about digital game-based learning  
**Yu-Hsuan CHANG, Meng-Jung TSAI**

**W09-03**  
Eye-tracking analyses of text-and-graphic design effects on E-book reading process and performance: “Spanish color vocabulary” as an example  
**Tse-Wen PAN, Meng-Jung TSAI**

**W09-04**  
Weblog as Learning Community for Supporting Astronomy Teaching in Thailand  
**Sakanan ANANTASOOK, Chokchai YUENYONG**
W09-06
The Perceived and Expected User experiences of AR Book Reading: the Perspective of Parents
Kun-Hung CHENG, Chin-Chung TSAI

W09-07
Design of MOOC for In-service Teacher Professional Development: A Case of Teachers’ Refresher Training Course in Hong Kong
Silu LI, Eric T. H. LUK, Morris S. Y. JONG

W09-08
Learning to create Technological Pedagogical Content Knowledge through distributed leadership: A Case Study of a Singapore Future School
Ching Sing CHAI, Benjamin WANG, Chun Ming TAN

W09-09
Development and validation of an instrument for exploring Taiwanese undergraduates’ approaches to Internet-based learning
Yu-Chih TSAO, Chi-Ling WU, Min-Hsien LEE

W09-10
Investigating Chinese University Students’ Perceptions about Blackboard Platform to support their online learning
Weisheng LI, Lizhu CHEN, Ge QU, Yan DONG

W09-11
Engineering Graduate Students’ Literature Searching Behaviors
Ying-Hsueh CHENG, Chin-Chung TSAI

W09-12
Developing an Online Formative Assessment System for a Chinese EFL Course
Chunping ZHENG, You SU, Jingjing LIAN, Chin-Chung TSAI

W09-13
Role-Play in Computer-Supported Collaborative Learning-An Explorative Study
Yu-Chen HSU, Yen-Lin CHIU

W09-14
Exploring the interactive use of video cases in scaffolding prospective teachers in learning clinical interview method
Yu-Ling HSU
Digital game and smart toy enhanced learning is becoming popular in academic research as well as commercial companies. There are more and more successful cases reported in using games and toys in learning. Educators, researchers as well as game-based learning designers believe that digital games and smart toys can strongly enhance learning because children are so engaged when they play games and toys. They also find that using game and toy in learning can enhance learning performance and creativity.

Design of digital games and smart toys for learning is a rapidly growing research area. Digital games include advanced computing technology while smart toys are embedded with wireless utilized chips and sensors. These new technologies make individual and social activities to be integrated possibly in new ways and reframe long-standing research questions, ideas, and approaches to learning. Beside fantasy and fun elements, digital games and smart toys have potential to enhance learners’ ability to communicate and interact with others during playing games and toys.

This workshop provides a forum, with paper presentations as well as interactive sessions for researchers and practitioners from various disciplines to exchange ideas in order to lay the foundation for this emerging research area.

VENUE, DATE and TIME

MEETING ROOM 3, NOVEMBER 30 (SUNDAY), 13:30-17:00

WORKSHOP ORGANIZERS

Ben CHANG, National Chiayi University, Taiwan
Tsung-Yen CHUANG, National University of Tainan, Taiwan

WORKSHOP URL

http://goo.gl/Bs92yY

ACCEPTED PAPERS

W10-1
The Effectiveness of Reducing State Anxiety by Digital Counseling Tool - Mind Collage
Yu-Jen HSU, Ju-Ling SHIH

W10-2
Math Island: Designing a Management Game of Primary Mathematics for Facilitating Student Learning
Charles Yen-Cheng Yeh, Hercy N.H. Cheng, Zhi-Hong Chen, Tak-Wai Chan

W10-3
The Change of Interpersonal Relationship for Group Development in Digital Game-based Adventure Education Course
Chang-Hsin LIN, Yu-Jen Hsu, Ju-Ling Shih, Chia-Chun TSENG

W10-4
Designing Educational Computer Game for Human Circulatory System: a Pilot Study
Jatuput LOKAYUT, Niwat SRISAWASDU

W10-5
The Curriculum Design of Nutrition and Food Safety Game for Elementary School Student
Chun-Heng LIN, Tsung-Yen CHUANG, Chung-Chiann CHUANG, Fang-Ying TU, Hua-Hsiang TSENG

W10-6
Thinking as a Pleasure: Tactics to Design Digital Educational Games from the Perspective of Board Games
Hercy Nien-Heng CHENG

W10-07
VocaMono: An Online Multiplayer English Vocabulary Learning Board Game
Jia-Jiunn LO, Chin-Kun HSIN

W10-08
The Application of Game-Based Learning in Early Childhood Acquisition
Sanko Lan, Joni Tzuchen Tang, Yie-Su HWANG
Owing to the rapid development of information and computer technology, numerous studies have investigated how to harness state-of-the-art technologies for effective language teaching and learning in the past decades. The unique features of modern ICT technology, such as 3D virtual environments, mobile computing, embodiment, and visual learning, have been expanding the potential and possibility of promoting the idea of learning languages anywhere and anytime in immersive and interactive contexts. Language learning is no longer limited in traditional settings or approaches. With the usage of modern advanced technology, language learning can be different experiences as we have so far. However, it is possible to encounter challenges and problems while introducing powerful learning technologies into practical application. This special issue calls for contributions towards an updated understanding of the practical and technical challenges that might be faced while applying advanced ICT technology to language teaching and learning, and to address important research trends and societal needs.

VENUE, DATE and TIME

CONFERENCE ROOM 4, NOVEMBER 30 (SUNDAY), 13:30-17:00

WORKSHOP ORGANIZERS

Yu-Ju LAN, National Taiwan Normal University, Taiwan
Hong-Fa HO, National Taiwan Normal University, Taiwan
Ching-Kun HSU, National Taiwan Normal University, Taiwan

WORKSHOP URL


ACCEPTED PAPERS

W11-01
Correlation of Professional English Reading VS. Eye Gazing and Frequency of Rereading Eye Movement
Hong-Fa HO, Guan-Yu HOU, Chen-Ku LIN, Chen-Hsiung LIN, Soh O-K

W11-02
Assisting Tools for Selecting Proper Semantic Meaning by Disambiguation of the Interference of the First Language
Nattapol KRITSUTHIKUL, Shinobu HASEGAWA, Cholwich NATTEE, Thepchai SUPNITHI

W11-03
Effects of Students Using Smartphones to Receive Different Amount of L1 Support for Listening Comprehension and Vocabulary Recall
Gwo-Jen HWANG, Yi-Hsuan HSIEH, Ching-Kun HSU
W11-04
Virtual English village: A task-based English learning platform in Second Life
Yu-Ju LAN, Hsiao-Hsuan WEI, Ya-Li CHIU

W11-05
Model for Supporting Cognitive and Metacognitive Strategies in Technology Enhanced Language Learning
Katrin SAKS, Äli LEIJEN

W11-06
The Impacts of Using Interactive E-book on the Learning Effectiveness of English blank-filling cloze
Gwo-Jen HWANG, Yi-Hsuan HSIEH, Ching-Jung HSUEH, Ching-Kun HSU

W11-07
Correlation of English Test Outcome From TVE Joint College Entrance Examination of Taiwan VS. Professional English Reading Speed and Comprehension
Hong-Fa HO, Yi-Yeh CHUNG, Chen-Ku LIN, Chen-Hsiung LIN

W11-08
A Tablet-based Chinese Composition Assessment System
Kat LEUNG, Barley MAK, Howard LEUNG

W11-09
Learning to learn collaboratively on Facebook – A pilot study
Sarah Hsueh-Jui LIU, Yu-Ju LAN
Workshop W12  
5th International Workshop on “Technology-Transformed Learning: Going Beyond the One-to-One Model?”

This workshop is a follow-up of the last four ICCEs’ workshops of the same title. The advancement of personal computing devices, from personal computers to mobile devices, has been gradually changing the landscape of the technology-transformed learning. This facilitates the incorporation of one-to-one computing into education and opens up endless possibilities of the design and enactment of innovative teaching and learning models (or the enhancement of pre-existing models), such as perpetual and ubiquitous learning, personalized learning, authentic and contextualized learning, seamless learning, rapid knowledge co-construction, among others. This leads to the further empowerment of the learners in deciding what, where, when, and how they would learn, and whom they would learn with/from. After the initial hype, however, there have been voices within the researcher community to reassess the notion of one-to-one computing in classroom and informal learning, such as whether one-to-one settings may impact peer collaboration and teachers’ roles, the issues of student and social readiness, as well as the explorations of alternative or hybrid settings of many-to-one, one-to-many, many-to-many, and one-to-one configurations.

The aim of this workshop is to provide a forum where international participants can share knowledge, experiences and concerns on the one-to-one technology-transformed learning and explore directions for future research collaborations.

VENUE, DATE and TIME

CONFERENCE ROOM 2, DECEMBER 1 (MONDAY), 09:00-12:30

WORKSHOP ORGANIZERS

Hyo-Jeong SO, Pohang University of Science & Technology, South Korea
Xiaoqing GU, East China Normal University, China
Tzu-Chien LIU, National Taiwan Normal University, Taiwan
Yanjie SONG, University of Hong Kong, China
Chengjiu YIN, Kyushu University, Japan

WORKSHOP URL

http://cumtel.weebly.com/2014.html

ACCEPTED PAPERS

W12-01
Exploring the Effectiveness of a Flipped Classroom Based on Control-Value Theory: A Case Study
Jiu-Tong LUO, Meng SUN, Bian WU, Xiao-Qing GU

W12-03
Analysis on Students’ Acceptance of Digital Reading in Ubiquitous Cooperative Inquiry-based Learning Environment
Jing-Ya CHEN, Jing LENG, Xiao-Juan XU, Xiao-Qing GU

W12-04
Visualizing Ubiquitous Learning Logs Using Collocational Networks
Kousuke MOURI, Hiroaki OGATA, Noriko UOSAKI, SongRan LIU

W12-05
The Research of China’s Policies and Practices of Life-long Learning in U-learning Environment
Bingqian JIANG, Jun XIAO, Jing LENG, Xiaoqing GU

W12-06
Phonic Social Network Software Scaffolds Language Learning in Ubiquitous Learning Environment
Huawen WANG, Jing LENG, Xiaoqing GU

W12-09
We are going to the ZOO! Virtual Badges in Formal out-of-school 1:1 Learning Journey with Smartphones
Ivica BOTICKI, Jelena BAKSA, Peter SEOW, Chee-Kit LOOI

W12-10
Building an Online Collaborative Learning Community in Ubiquitous Learning Environment
Ru ZHANG, Jing LENG, Xiaoqing GU, Guanfeng FU, Huawen WANG

W12-11
Identifying User’s Perceptions Toward Integrating Mobile Applications in Science Education
Hyo-Jeong SO, Hye-Gyoung YOON, Hyungshin CHOI, Heung-Chang LEE, Kyudong PARK
Thinking skills are cognitive processes that human beings apply for sense-making and problem-solving (Beyer, 1988). Thinking skills have been identified and characterized in a variety of ways by academics as well as by professional bodies, such as, ABET student outcomes (ABET, 2014), 21st Century skills (Pellegrino & Hilton, 2012), science process skills (Padilla, 1990), computational thinking skills (ISTE, 2014). Examples of such skills include critical thinking, engineering design, problem formulation and solving, creation and revision of scientific models, decision making, experimentation skills, data analysis and so on. Regardless of the education discipline, development of thinking skills has been shown to be crucial for students’ success in the 21st century workplace (NAS, 2014). However, thinking process skills do not get developed automatically into learners, even if teachers may assume so. Hence it is important to emphasize the teaching and learning of thinking process skills explicitly, in addition to content in formal education (Redish & Smith, 2008).

Researchers have explored various approaches for developing such thinking skills in learners by utilizing affordances of TEL environments such as automated formative assessment, inquiry via interactive simulations, and opportunities for collaboration and reflection. The goal of this workshop is to provide an interactive platform for researchers and educators to explore various facets of Technology Enhanced Learning of Thinking Skills (TELoTS).

VENUE, DATE and TIME
MEETING ROOM 3, NOVEMBER 30 (SUNDAY), 09:00-12:30

WORKSHOP ORGANIZERS
Sahana MURTHY, Indian Institute of Technology Bombay, India
Sridhar IYER, Indian Institute of Technology Bombay, India
Mrinal PATWARDHAN, Indian Institute of Technology Bombay, India

WORKSHOP URL
http://www.et.iitb.ac.in/icce-telots-workshop/

ACCEPTED PAPERS
W13-01
Integration of multiple external representations in chemistry: a requirements-gathering study
Prajakt PANDE, Sanjay CHANDRASEKHARAN

W13-02
How does representational competence develop? Explorations using a fully controllable interface and eye-tracking
Aditi KOTHIYAL, Rwitajit MAJUMDAR, Prajakt PANDE, Harshit AGARWAL, Ajit RANKA, Sanjay CHANDRASEKHARAN

W13-03
Using Ontology for Representing Role Change Design in Nursing Service Thinking Education
Wei CHEN, Liang CUI, Koji TANAKA, Hirotaka NISHIYAMA, Noriyuki MATSUDA, Mitsuru IKEDA

W13-04
Self-assessment rubrics as metacognitive scaffolds to improve design thinking
Madhuri MAVINKURVE, Sahana MURTHY
Environmental education includes worldwide issues, it can be learned and teach indoor and outdoor, as well as scenarios of the development of environment. Since educational technology is the necessary tools for the information generation in learning, this workshop hope to integrate these two great potential research fields. This workshop aims to provide an interactive channel for interdisciplinary researchers, teachers, and software developers to present short papers, to communicate and discuss with one another on relevant issues regarding the application of advanced educational technologies in Environmental education.

**VENUE, DATE and TIME**

**MEETING ROOM 1, NOVEMBER 30 (SUNDAY), 09:00-12:30**

**WORKSHOP ORGANIZERS**

Hsin-Chih LAI, Chang Jung Christian University, Taiwan
Ying-Tien WU, National Central University, Taiwan

**WORKSHOP URL**

http://envircenter.cjcu.edu.tw/ICCE2014/WATEE

**ACCEPTED PAPERS**

W14-01
The Application of QR Codes in Outdoor Education Activities: Practice and Discussion
Wen-Shian LEE, Chun-Yen CHANG

W14-02
The Application of Instructional Media and IRSin Environmental Education - Focus on the Rocky Terrain in Northern Coast of Taiwan
Wen-Mao CHUNG, Te-Shin TSAI, Chun-Yen CHANG

W14-04
Effect of Inquiry Web-Based Learning Competition for Gifted Students in Junior High School
Yen-Hung SHEN, Wen-Gin YANG

W14-05
Evaluation of the Situation Somatosensory Game Digital Learning for Global Warming Misconception
Hsin-Chih LAI, Chi-Chen LI

W14-07
The Environmental Education of Migration Birds Using a Near Time Web-based Design
Chow Jeng WANG, Chen-Jeih Pan, Yi Jong TSAI
The name of this workshop, SKALTES, is the abbreviation of “SKill Analysis, learning or teaching of skills, Learning environments or Training Environments for Skills”. The first workshop was held in ICCE2011, where seven interesting papers from various skill domains were presented and discussed. The second one was held in ICCE2012, where eight high level papers were presented. The third one was held in ICCE2013, where four impressive papers were presented. In this workshop, “skill” means special techniques to do something by interacting with objects, other persons or environments. Creating arts and playing sports are examples of the category of the skill. The skill consists of recognition of objects or environments, selection of appropriate action, and execution of action. A learner repeats these processes when he or she learns and trains skills. In this workshop, analyses of these skills are the key issues. In addition, how to learn skills or how to train for acquiring the skills are also important. Moreover, designs or developments of learning environments or training environments for the skills are also included. Not only completed research papers but also ongoing research papers are welcome. Participants in this workshop will be able to know various aspects of skills and also various approaches for skill learning research. Fruitful discussions on skill learning and training are expected in this workshop. Hopefully, this workshop will contribute to develop new skill learning studies.

VENUE, DATE and TIME

CONFERENCE ROOM 4, DECEMBER 1 (MONDAY), 13:30-17:00

WORKSHOP ORGANIZERS

Yasuhisa TAMURA, Sophia University, Japan
Masato SOGA, Wakayama University, Japan
Kenji MATSUURA, Tokushima University, Japan
Naka GOTODA, Japan Institute of Sports Sciences, Japan
Yukie MAJIMA, Osaka Prefectural University, Japan
Yurie IRIBE, Aichi Prefectural University, Japan

WORKSHOP URL

http://skaltes.cc.sophia.ac.jp

ACCEPTED PAPERS

W15-01
Development of Sign Language Training Machine using Depth Sensor
Yuichiro MORI, Akie FUKUHARA, Shogo HAYASHIDA

W15-02
Significance and Possibility of E-Learning for Choreographic Skills in Contemporary Dance
Bin UMINO, Asako SOGA, Motoko HIRAYAMA

W15-03
Design of an Environment for Motor-skill Development based on Real-time Feedback
Keita YAMADA, Kenji MATSUURA

W15-04
Content Management System to Support Improvement in Quality of Fitness Testing of Athletes
Yuji KOBAYASHI, Naka GOTO DA

W15-05
Development of a Learning Environment for Novices' Erhu Playings
Fumitaka KIKUKAWA, Masato SOGA, Hirokazu TAKI

W15-06
Analysis and Feedback of Baseball Pitching Form with use of Kinect
Yasuisha TAMURA, Taro MARUYAMA, Takeshi SHIMA
The availability of mobile access everywhere is promising to augment learning space, as it provides learners a new way to communicate, collaborate, and interact. Therefore, computer-supported ubiquitous learning is an emerging trend to acquire or share knowledge. Through a variety of digital devices, learners can easily turn anywhere outside the classroom into an informal learning space. As learners become increasingly digitally literate, education needs to be reshaped by considering the innovation and support of virtual learning spaces. As foreseen, innovative design of learning space has a great potential to enhance learning, especially for escalating motivation and engagement. We expect to receive those studies relevant to innovative design of learning software, applications or evaluation methods for learning spaces.

**VENUE, DATE and TIME**

**CONFERENCE ROOM 4, NOVEMBER 30 (SUNDAY), 09:00-12:30**

**WORKSHOP URL**

http://ilearning.csie.stust.edu.tw/ICCE2014workshop/

**WORKSHOP ORGANIZERS**

Yueh-Min HUANG, National Cheng Kung University, Taiwan  
Shu-Chen CHENG, Southern Taiwan University of Science and Technology, Taiwan  
Maiga CHANG, Athabasca University, Canada

**ACCEPTED PAPERS**

**W17-01**  
The Integration of Augmented Reality Mobile Learning and Self-Regulated Learning by using Concept Mapping - A Case Study of the Plants in Campus  
*Po-Han WU, Gwo-Haur HWANG, Yu-Syuan WANG, Yen-Ru SHI*

**W17-02**  
Application of Teams-Games-Tournament Strategy to Investigate Learning Effectiveness in Primary Schools  
*Shu-Hsien HUANG, Ting-Ting WU, Yueh-Min HUANG*

**W17-03**  
Education 3.0 and Beyond: A learner-led Experience of Education  
*Pranav KOTHARI, Anurima CHATTERJEE*

**W17-04**  
The Impact of Affective Tutoring System and Information Literacy on Elementary School Students’ Cognitive Load and Learning Outcomes  
*Ching-Ju CHAO, Shang-Chin TSAI, Chia-Hsun LEE, Tao-Hua WANG, Hao-Chiang Koong LIN*

**W17-05**  
Development of Digital Game-based Biology Learning Experience on Cell Cycle through DSLM
Instructional Approach
Porntip KANYAPASIT, Niwat SRISAWASDI

W17-06
Mobile Augmented Reality in Supporting Performance Assessment: An Implementation in a Cooking Course
Kuo-Hung CHAO, Chung-Hsien LAN, Yao-Tang LEE, Kinshuk, Kuo-En CHANG, Yao-Ting SUNG

W17-07
Investigating effects of mobile learning in familiar authentic environment on learning achievement and cognitive load
Rustam SHADIEV, Wu-Yuin HWANG, Yueh-Min HUANG, Tzu-Yu LIU

W17-08
Applying Adaptive Hybrid Recommendation Technology for Searching Algorithm Learning Articles
Shu-Chen CHENG, Shih-Che HUANG