ASIA-PACIFIC SOCIETY FOR COMPUTERS IN EDUCATION

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SUCCESSFUL CONVENING OF THE 14TH INTERNATIONAL CONFERENCE ON COMPUTERS IN EDUCATION (ICCE2006)

The 14th International Conference on Computers in Education, under the auspices of the Asia-Pacific Society for Computers in Education (APSCE), was successfully organized by the School of Educational Technology (SET), Beijing Normal University (BNU), China, in Beijing from Nov 30 to Dec 4, 2006. The opening speeches were delivered by Binglin Zhong, the President of BNU, Fong-lok Lee, the President of APSCE, Ronghuai Huang, the Organizing Committee Chair of ICCE2006 and Dean of SET, and Riichiro Mizoguchi, Program Committee Chair of ICCE2006. Prof. Pierre Dillenbourg from the Swiss Federal Institute of Technology Lausanne, Switzerland was given the honour of introducing the opening keynote speaker, Prof. Ton de Jong from University of Twente, the Netherlands.

The theme of ICCE 2006 was "Learning by Effective Utilization of Technologies: Facilitating Intercultural Understanding." Four keynote speeches, 8 workshops, 1 tutorial, 13 presentations in Doctoral Student Forum, 23 paper presentation sessions, 1 poster session and 4 interactive events were arranged and chaired by well-known professors around the world. A total of 45 full papers and 53 short papers, each of which were strictly reviewed by a panel of reviewers and double-checked by the co-chairs of the programme committee, were accepted for presentation at the conference. In addition, 20 posters were presented at the conference venue.

A total of 175 overseas delegates and 68 domestic delegates from around 20 countries and regions, including China, Hong Kong, Taiwan, Singapore, Japan, the United States, the United Kingdom, Malaysia, Australia, the Netherlands, Germany, Sweden, Philippines, Switzerland, New Zealand, Mexico, Vietnam, France, Spain, etc. attended ICCE2006.

The additional financial funding by the Ministry of Education of China and Chinese Association of Artificial Intelligence is deeply appreciated as it certainly helped ensure the great success of ICCE2006. With the help of 25 well-trained volunteers from BNU and careful arrangements from the local organizing committee, ICCE2006 was indeed a joyful event and it has certainly left a memorable impression on participants from all over the world.

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ICCE2006 BEST PAPER AWARDS

Incorporating Online Discussion in Classroom Learning: A New Strategy by Wenli Chen and Chee Kit Looi

Ontological Modeling Approach to Blending Theories for Instructional and Learning Design by Yusuke Hayashi, Jacqueline Bourdeau and Riichiro Mizoguchi

Computer-Supported Content Analysis for Collaborative Knowledge Building in CSCL by Jian Liao, Yanyan Li, Ying Zhou, Ronghuai Huang and Jingjing Wang

ICCE2006 BEST STUDENT PAPER AWARDS

An Integrated Framework for Fine-Grained Analysis and Design of Group Learning Activities by Seiji Isotani (Co-authored and Supervised by Riichiro Mizoguchi)

Developing a VR-based Projectile System Using Haptic Device for Learning Physics by Atsushi Kanbe (Co-authored and Supervised by Yukihiro Matsubara, Noriyuki Iwane and Kimiko Hirayama)

THEME—Supporting Learning Flow Through Integrative Technologies

DATE—November 5-9, 2007

VENUE—Hiroshima Prince Hotel, Hiroshima, Japan.

The 15th International Conference on Computers in Education (ICCE2007), to be held in Hiroshima and hosted by JSET (Japan Society for Educational Technology) and JSiSE (Japanese Society for Information and Systems in Education), will be a prestigious and high quality international conference that provides a forum for scholarly exchanges and interactions in employing the use of computing technologies in education. ICCE conferences have been enhancing quality research and developments in technology-supported education throughout the Asia-Pacific region and beyond.

The 2007 theme sets a special focus on integrative technologies and learning flow. This theme acknowledges the fact that we have begun to see integration as a purpose of educational media usage of its own right. The value of integration is primarily characterised by improving the richness and directness of educational interactions. We can distinguish several aspects of integration: The integration of media and processes can support a smooth and seamless information flow in different learning settings. Also, it is important to provide technologies to bridge different conditions of learning, such as individual, small group or large community activities. Finally, learning processes and learning flow can be modeled by educational modeling languages to support learning design and analysis.

The technical program of ICCE 2007 will include paper sessions, posters, tutorials, workshops, invited speeches, a doctoral consortium and other special events. ICCE2007 solicits paper and proposal submissions of original, principled research papers dealing with theoretical, methodological, empirical and application-related aspects of computers in education. Papers must clearly demonstrate relevance to computers in education. Conference proceedings will be published by IOS Press. Submissions are to be done electronically at http: http://www.icce2007.info

Topics include but are not limited to the following:

- **Learning Sciences:** Inter-disciplinary perspectives, theory development, experimental methods, design research.

- **Socially Informed Design:** Social and cultural dimensions of learning, social-historical-cultural contexts, learning and identity, motivation and engagement in learning, informal learning environments.

- **Collaborative and Group Learning:** Group learning environments, networked learning communities, analysis and modeling of group interactions, design principles for collaborative learning environments, communities of learners, communities of practice, Blog culture and its impact on education.

- **Instructional Design:** Design, Development and Evaluation of Learning Environment, Grid-based Distributed Learning Environment and Resources Environment, Middleware, Groupware.

- **Learning Systems Platforms and Architectures:** Web-based learning platforms, technology standards for e-Learning, including metadata for learning objects and materials, document management for learning applications, authoring tools and assessment tools.

- **Modeling and representation:** Models of learners and facilitators, learning process models and learning design (IMS-LD), tasks and problem-solving processes, knowledge representation and ontologies, discourse representation and analysis.

- **Intelligent Tutoring and Scaffolding:** Adaptive environments (web-based and others), pedagogical agents, cognitive diagnosis, instructional planning, motivational diagnosis and feedback, data mining and machine learning.

- **Ubiquitous and Mobile Technology:** Ubiquitous computing and mixed reality learning environments, wireless and mobile technologies, 3D learning and training environments, multi-modal interfaces for learning, innovative educational multimedia systems.

- **Applications:** Language learning, mathematics and science education, industrial, medical and other applications.

- **e-Learning and Knowledge Management:** Organizational e-Learning strategies, blended e-Learning, instructional design, mentoring and coaching programs, human resource management and development, lifelong learning, evaluation of e-Learning, quality

management of e-Learning.

- **Leadership in e-Education:** Innovative pedagogical models, policies and strategies for technology implementation, professional development.
- **Evaluating of Teaching and Learning Technologies:** Performance Technology n Education, Evaluation of e-Learning Programs, Assessing the Use of Technology in Teaching and Learning.

Important dates

Full Papers, Short Papers

Submission deadline:	April 23, 2007
Acceptance notification:	July 9, 2007
Proceedings copy due:	August 6, 2007
Author registration:	August 6, 2007

Doctoral Students Consortium (DSC)

Submission deadline:	April 23, 2007
Acceptance notification:	July 9, 2007

Workshop Proposals

Proposals due:	May 28, 2007
Acceptance notification:	June 11, 2007

Tutorial Proposals

Proposals due:	July 2, 2007
Acceptance notification:	July 16, 2007

Interactive Events

Submission deadline:	August 13, 2007
Date of notification:	September3, 2007

Conference Chair:

Fong-Lok Lee, Chinese University of Hong Kong, Hong Kong

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Yoneo Yano, Tokushima University, Japan

Organizing Committee Vice-Chair:

Mitsuru Ikeda, Japan Advanced Institute of Science and Technology, Japan

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Tsukasa Hirashima, Hiroshima University, Japan

Ulrich Hoppe, University Duisburg-Essen, Germany

Shelley Shwu-Ching Young, National Tsing Hua University, Taiwan

CALL FOR PAPERS FOR SPECIAL ISSUE OF RESEARCH AND PRACTICE IN TECHNOLOGY ENHANCED LEARNING: LEARNING COMMUNITIES

SPECIAL ISSUE EDITORS:

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Proposed timeline *(variation may occur).*

November 2006: Formal call for papers. Authors are encouraged to contact the editors in advance of submission with an expression of interest. There is no specified word limit for submitted papers, but authors are advised that clear, succinct writing is expected. An article length of 6000 words is a useful benchmark. Further information on submission formatting is available at
http://www.apsce.net/Download/LC-RFP.pdf

End of February 2007: Deadline for paper submissions to go out for review. Each paper will be sent to three reviewers.

End of May 2007: Reviews finalized and sent to authors

End of July 2007: Deadline for revised manuscripts

End of September 2007: Edited manuscript sent to publisher

The editors invite scholarly articles on learning that takes place within communities and sociotechnical design for this learning, to be considered for a special issue of Research and Practice in Technology Enhanced Learning. Studies of learning in online communities and studies of community-oriented approaches in educational settings are acceptable, as are studies of learning in communities of practice, communities of interest, or

groups defined in other ways. Papers should state the authors' position concerning how learning takes place by virtue of the community setting (editors prefer papers in which community is intrinsic to the learning studied). Although there is a preference for contributions that are grounded in empirical evidence, strong theoretical papers will also be considered. Methodologies from diverse research traditions are acceptable, provided that the quality of work is convincing to researchers within the given tradition and the presentation is comprehensible to readers outside of the tradition.

The following questions are offered as examples of relevant topics. Studies that address other questions related to learning communities are also welcome.

- How can theory and practice inform design for learning communities? What aspects of learning in communities can be designed for, and which are primarily emergent? How can these designed and emergent aspects mutually reinforce each other?
- What affordances does a given technology offer for social aspects of learning, and how do these affordances compare to alternative technologies? How can instructional scenarios or collaborative strategies best realize the advantages of the technology?
- How can technology-mediated learning environments be designed to support heterogeneous members and their various trajectories of participation? For example, how can a learning environment support transitions from apprenticeship to expertise? How can "lurkers" not only learn, but also become assets to the community? What are the learning needs of multidisciplinary teams? What considerations arise in international community settings?
- What tensions between individual needs and the needs of the community exist in learning communities? How can these tensions be leveraged to drive learning in communities, and how can technology amplify this potential while mitigating the problems of conflicting needs?
- What is the relationship between self-identity and group identity in learning communities, and how do these identities motivate participation that leads to learning? How is change in identity itself a form of learning? How then should identity be reflected in technology-mediated environments?
- Which research and analysis methods are adequate for studying technology-enhanced learning in communities? Can experimental methods address learning that takes place over long time periods and many individuals in communities that are self-governed? Are ethnomethodological approaches viable alternatives? Do we need other methods? Do we need to invent new ones?

SHOWCASE ON ICCE2006 BEST PAPER AND BEST STUDENT PAPER AWARDS

As a special recognition of researchers' achievement, one ICCE2006 best paper award and one best student paper award are showcased in this issue of APSCE newsletter—

BEST PAPER AWARDS—INCORPORATING ONLINE DISCUSSION IN CLASSROOM LEARNING: A NEW STRATEGY

BY WENLI CHEN AND CHEE-KIT LOOI

Wenli Chen (PhD, Nanyang Technological University) is a research fellow in Learning Sciences Lab (LSL), National Institute of Education, Singapore. Her current research interests include computer-mediated communication, learning community, mobile technology in learning. She has contributed to a number of research projects in the fields of communication and education and has published more than 20 journal and conference papers.

Chee-Kit Looi (PhD, University of Edinburgh) is Head of Learning Sciences Laboratory, National Institute of Education, Singapore. He has been very much involved in educational technology research for more than two decades. He has designed intelligent tutoring systems, and interactive and collaborative learning environments, some of which have been used by students in Singapore, and some had been commercialised. He is currently doing active research into technology-enabled mathematics learning, learning communities and mobile computing.

About Learning Sciences Laboratory

This study is one of the outputs of one of the LSL projects: Fostering a Teachers' Community of Practice mediated by an emerging CSCL tool. LSL was formed in 2005 and is the first centre in Asia devoted to conducting research based on theory and research perspectives from the learning sciences. Currently, there are 12 faculty researchers and 32 research assistants and support staff. The LSL is committed to doing rigorous research into real world issues in learning and teaching in Singapore schools that will also advance important theoretical and research

perspectives in the learning sciences and in education. LSL's website is: http://lsl.nie.edu.sg

About the paper

The majority of existing research regarding online discussion for education and learning has focused on exploring the use of online discussion in an off-classroom setting. This study presents a new look at online discussion, implements online discussion in both in- and off-classroom setting. Is the application of online discussion to an in-class setting a useful new teaching and learning strategy, or just an impractical idea? This study evaluates the advantages and drawbacks of the practice for exploring the applicability of adopting it as a new teaching and learning strategy.

The online discussion group examined in this study consists of 16 Heads of Departments of Information Technology from a few Singaporean schools who attended the professional development course at National Institute of Education, Singapore. A typical teaching and learning cycle of this course is the following:
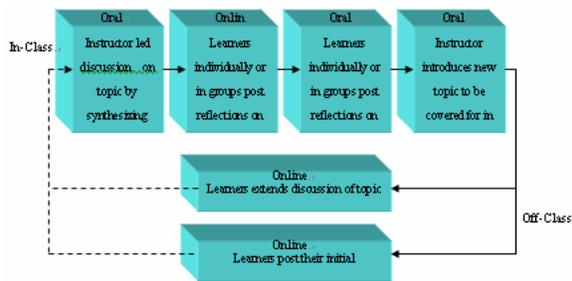
Content analysis of the online postings, classroom observations, and in-depth interviews were employed in this study. The study found that with in-class online discussion, the participation of discussion was more "equalized" and the class became a more democratic learning environment - those "reticent" to speak in front of others were encouraged to express themselves, whereas those inactive in thinking were pushed to think and post more frequently. In addition, in-class online discussions provided a wider spectrum of discussion perspectives.

The chi-square tests results show that in-class online discussions contained more in-depth clarifications and inferences, and demonstrated deeper levels of information processing that involved relating new information to the participants' experiences, critically evaluating ideas, and exploring strategies. This implies that in-class online discussion was successful in supporting the learner's cognitive thinking.

Easy circulation and archiving of files and documents are also attractive features of such discussions. The online platform provided a permanent record of thoughts and reflection, and it made learning more effective by providing better access to group knowledge and support.

Several disadvantages with in-class online discussion were also revealed by the study. It lacks interaction because most of the online postings were task-oriented and independent postings without replying and commenting on others' postings. And, too much online discussion in class may slow the progress of the class. The topics for online discussion during class should be carefully chosen. In this study, it was found that those novel topics and those practical topics closely relevant to their work attracted more high-quality postings. In addition, the effectiveness of in-class online postings may vary from learner to learner. The design could promote self-discipline and requires students to take more responsibility for their own learning.

BEST STUDENT PAPER AWARDS—AN INTERGRATED FRAMEWORK FOR FINE-GRAINED ANALYSIS AND DESIGN OF GROUP LEARNING ACTIVITIES

BY SEIJI ISOTANI AND RIICHIRO MIZOGUCHI

Seiji Isotani is a PhD candidate in Information and Communication Engineering, Graduate School of Engineering at Osaka University, Japan. Since 2005, he has been attached to Mizoguchi Laboratory at the Institute of Scientific and Industrial Research working with ontological engineering and its applications in learning with emphasis in collaborative learning (CL), intelligent educational systems and ontology-aware authoring systems. Prior coming to Japan, Isotani was awarded the bachelor and master's degree in Computer Science from the University of Sao Paulo, Brazil, in 2002 and 2005, respectively.

This paper, co-authored by Professor Riichiro Mizoguchi, Director of Mizoguchi Laboratory, describes an ongoing research that uses Ontological Engineering to establish basic theories and technologies for the next generation of intelligent educational systems for collaborative learning.

The focus of this work was how to represent learning theories for CL to improve designing and analysis of CL sessions based on theoretical justifications. The current understanding about CL is based on various learning theories, which are

always expressed in natural language and are particularly complex given the context of group learning where the synergy among learner's interactions affects the learning processes and hence learning outcomes. It is in fact currently difficult for both humans and computers to clearly understand and differentiate between the various learning theories and because of that it is difficult to support the design of group activities based on well-grounded theoretical knowledge.

Our approach uses past 10 years of achievement in Mizoguchi laboratory, including opportunistic group formation and theory-based group formation, to propose a framework based on ontologies that describes the most common learning theories used to support CL activities. We re-analyzed seven different learning theories (for example, Peer Tutoring, Cognitive Apprenticeship, LPP) to establish a common understanding of what a learning theory is by representing it in terms of its explicitness, formalism, concepts and vocabulary. This makes theories understandable both by computers and humans. And then we showed how to use these theories to allow an effective design and analysis of CL activities.

For users (designers, teachers, educators), our framework allows a graphical visualization of learning theories, considering the relationships among strategies, interaction, roles and goals. Thus, users can quickly understand the theories, their benefits and how to propose sequence of activities in compliance with them. For computers, it provides a formal structure which allows systems to reason about features prescribed by theories. With such capability we can compare real interactions with interaction patterns prescribed by theories to find problems in learning processes or to estimate educational benefits for learners. Furthermore, it is possible, given learners' initial stages, to set a group and suggest the best sequence of activities based on one or many theories that can lead the learners to achieve desired goals.

Our contribution is another step forward in the improvement of ontology-aware authoring system for CL that helps user to design learning activities based on learning theories, to provide an easy way to analyze interactions among learners and to estimate educational benefits for learners. Our ultimate goal is to completely develop such an ontology-aware authoring system for CL.

NEWS ABOUT APSCE MEMBERS

PROMOTIONS

Congratulations to one of our members on his recent promotion. Best wishes and much success in his endeavors.

Dr. Kong Siu Cheung is an academic at the Department of Mathematics, Science, Social Sciences and Technology of the Hong Kong Institute of Education and was promoted to Associate Professor of the Department of Mathematics, Science, Social Sciences and Technology in the Hong Kong Institute of Education with effect from September 2006.

Dissemination of news of its members and news for its members has been the goals of APSCE's newsletters. Personal news about community members (such as job changes, promotions, etc), research developments (e.g., new centers, books, software), and recent academic activities are more than welcome to be emailed directly to Fu-Yun Yu (Chair, Newsletter Subcommittee). For your piece to be included in the next issue, an electronic copy of the file must be emailed to Fu-Yun Yu 10 days prior to the scheduled publication date of next issue (May 10 of 2007) at fuyun@mail.ncku.edu.tw

FORTHCOMING ICT-RELATED CONFERENCES

Global Chinese Conference on Computers in Education (GCCCE 2007)

Conference Co-Chairs

Tai-Wai Chan (Chair, Graduate Institute of Network Learning Technology; Director, Science and Technology for Learning, National Central University of Taiwan, Taiwan)

Kedong Li (Chair, School of Educational Technology; Director, Institute of Educational Technology, South China Normal University, Guangzhou)

Theme: Research in IT and Education: a Multi-Disciplinary Perspective

The conference serves as an important forum in

providing vast opportunities for researchers and educators to discuss and share ideas over application of computer in education. It would enhance the awareness of employing information and computing technologies in teaching and learning. GCCCE2007 will be held in Quangzhou, China from May 26 to 30. The goal of the conference is to promote the application of ICT in education. Details of this conference can be obtained from http://www.gccce2007.org

International Conference on Advanced Learning Technologies (ICALT 2007)

General co-chairs

Toshio Okamoto (The University of Electro-Communications, Japan)

Kinshuk (Athabasca University, Canada)

Stefano A. Cerri (LIRMM, CNRS & Un. Montpellier II, France)

Theme: Distributed social and personal computing for learning and instruction

ICALT will be held on July 18-20 in Niigata, Japan. This conference creates opportunities for presenting and discussing vivid, creative solutions and experimental work at the point of collaborative learning via advanced media. Details of this conference can be obtained from http://www.ask.iti.gr/icalt/2007/

The 5th International Conference on Education and Information Systems, Technologies and Applications (EISTA 2007)

Program Committee Chair
Friedrich Welsch

Relationships between Education/Training and Information/Communication Technologies (ICT) are getting stronger and more dynamic, sometimes in unexpected ways, with original ideas and innovative tools, methodologies and synergies. The main

objective of EISTA '07 is to bring together researchers and practitioners from both areas, to support the bridging process between education/training and ICT communities. EISTA will be held from July 12-15, in Orlando, Florida, USA and more information about this conference can be accessed from http://www.cyber-inf.org/imsci2007/website/default.asp?vc=5

The 6th International Conference on Web-based Learning (ICWL 2007)

ICWL is an annual international conference on web-based learning. ICWL will be the 6th ICWL conference. This conference will be held in August 15-17 in Edinburgh, United Kingdom. The technical program will feature keynote addresses, tutorials, and special sessions, in addition to technical presentations of refereed papers. More information about this conference can be obtained from http://www.hkws.org/events/icwl2007/

World Conference on Educational Multimedia, Hypermedia & Telecommunications (ED-MEDIA 2007)

This annual conference serves as a platform for the discussion and exchange of information on the research, development, and applications related to various fields of multimedia, hypermedia and telecommunications/distance education. ED-MEDIA will be held in Vancouver, Canada on June 25- 29. More information about this conference can be obtained from http://www.aace.org/conf/edmedia/default.htm

APSCE HQs has set up a public mailing list (http://mail.apsce.net/mailman/listinfo/bulletin/) Members who have news that are of high interests to members of the Society can take advantage of this newly added feature on APSCE's website.