

# Introduction to the Proceedings of CSCL 2011

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## The Scientific Field of CSCL

Computer-Supported Collaborative Learning (CSCL) is a multidisciplinary research field inspired by the power of collaborative learning and by the promise of computer technologies to support collaborative learning. It draws on and explores constructivist and socio-cultural theories, which view learning as a social, interpersonal, meaning-making process that takes place largely through interaction among people and within communities. It also designs, adopts and refines technologies that mediate communication among learners and that help to guide their inquiry or structure their work.

As a research field, CSCL builds on conceptual frameworks and analytic approaches of many academic fields, including education, psychology, communication, computer science and social science. It applies a variety of quantitative and qualitative research methods, often combining them to develop richer understandings of complex phenomena. Likewise, it may involve both laboratory and classroom studies, formal and informal learning settings, different temporal scales and the study of a wide range of influential factors.

## Policies and Practices for CSCL

While the CSCL conference series has centered on research studies, the field has always been strongly oriented toward practical concerns of educational practice and associated educational policy. CSCL research frequently involves teachers in school classrooms and seeks to influence or implement governmental education policies.

The CSCL 2011 conference theme, “*Connecting computer-supported collaborative learning to policy and practice*,” builds on previous CSCL conferences to examine whether and how CSCL practices can bring deep changes to formal and informal educational practices at all levels, and contribute to educational improvement at a system level by informing education policy. This theme is addressed by keynote talks, symposia, trips to schools, and other events at the conference and the post-conference. It is hoped that this conference theme will contribute to bringing greater recognition to the fields of CSCL and the Learning Sciences by drawing the attention of a wider public, including policy makers and the professional educational community to their research and development contributions.

One important feature of this year’s conference is the inclusion of three parallel tracks of interactive events, demonstrations and CSCL-in-practice showcases, which serve as the foci for attracting practitioners to the conference. Included in these practitioner-oriented events are presentations from several prominent school-university partnership projects that are themselves good exemplars of the conference theme in action. The conference has the support of policy makers in Hong Kong to sponsor teacher participation at the conference; the Education Bureau of the HKSAR Bureau is a supporting organization for this conference. The practitioner tracks are also made possible through the merger of other conferences into this year’s CSCL conference. This year, the annual Knowledge Building Summer Institute, which has usually been held in Toronto, Canada, has been integrated into the CSCL conference in Hong Kong and Guangzhou.

To take advantage of CSCL 2011 being held in Hong Kong, CITE collaborated with East China Normal University, South China University and Beijing Normal University to co-organize a series of CSCL 2011 post-conference events in Shanghai, Guangzhou and Beijing respectively on July 11-15. It is the first time that there are such major post-conference events for the CSCL conference and we hope this will provide more opportunities for academic exchange and collaboration between CSCL and learning sciences researchers in Greater China and their global counterparts.

## The CSCL Community and Conference

Since 1995, the CSCL conference has provided a stimulating and friendly venue for people interested in the multi-disciplinary issues of computer-supported collaborative learning to meet in a relaxed atmosphere with a variety of formal and informal events. Structured activities and social occasions promote interpersonal relations and knowledge building. The conference’s human size and structure facilitate getting to know international colleagues and discussing cutting-edge ideas in educational practice, technology design, CSCL theory and diverse research approaches.

The bi-annual conferences have been instrumental in developing the field of CSCL and in building the research community around it. The conferences took place in Bloomington, USA (1995), Toronto, Canada (1997), Stanford, USA (1999), Maastricht, Netherlands (2001), Boulder, USA (2002), Bergen, Norway (2003), Taipei, Taiwan (2005), New Brunswick, USA (2007) and Rhodes, Greece (2009).

Further efforts to build the CSCL field include the founding of the International Society of the Learning Sciences (ISLS) by the CSCL community and the Learning Sciences research community. ISLS now provides an institutional framework for running the CSCL and ICLS conferences in alternating years and for publishing the *International Journal of Computer-Supported Collaborative Learning (ijCSCL)* and the *Journal of the Learning Sciences (JLS)*. In the early days of CSCL research, there was no publication venue specifically oriented to the field and it was hard to locate publications in the field. Now, in addition to the CSCL journal, there is also a CSCL book series sponsored by ISLS and published by Springer. Furthermore, papers from the CSCL and ICLS conferences are available in the ACM Digital Library and both *ijCSCL* and *JLS* are abstracted in the major indexing services, where they are highly ranked.

## **Toward a Global CSCL**

The first CSCL conference was a relatively simple event, held in the middle of the United States. Over the years, the conference expanded to include a variety of sessions to meet the needs of a growing research community. It now features long papers presented lecture style, posters presented interactively and short papers presented in a hybrid style, to accommodate research findings ranging from early work to more mature reports. There are also tutorials for newcomers and workshops for special hot topics. For doctoral students and new faculty, there is a doctoral consortium and an early career workshop. There are also opportunities for software demos and other interactive events. And of course there are receptions and other social events to give extra times for people to get to know each other.

Although the CSCL community always had a strong base in Western Europe—partially associated with the AI and Education community—the first official CSCL conferences were held in North America. In 2001, a Euro-CSCL conference was organized in the Netherlands, attracting mainly European researchers. In 2002, the conference in the US achieved a good balance of European and American researchers; it initiated a policy of rotating the conferences to Europe (in 2003 and 2009), Asia (in 2005 and 2011) and North America (in 2007 and 2013). The conference in Taipei (2005) succeeded in achieving a good balance of paper authors, program committee members and conference participants from Western Europe, North America and the Asia-Pacific region.

Internationalization has always been a goal of the CSCL community. An analysis of trends during the first decade of the conferences documented strong progress in that direction (Kienle & Wessner, 2006). Analysis of authors included in the CSCL 2011 main conference shows approximately equal participation from Western Europe, North America and Asia-Pacific. Another important trend is an increase in the number of international collaborations in research and in the co-authorship of papers reporting on that research. Such collaboration is necessary for the spread of expertise and deep understanding of innovative ideas, methods and tools. This year's post-conference activities are an additional opportunity to promote exchange with researchers, practitioners and policy makers in Mainland China, an important area in which CSCL approaches seem to be spreading rapidly.

Of course, there are still major regions of the world under-represented in the CSCL community, such as the Middle East, Eastern Europe, Central Asia, South America and Africa. To some extent this may be due to limited traditions of collaborative learning or relatively low levels of computerization in schools in those areas. It may also be due to limitations in resources for traveling to international conferences or in awareness of the field. We have seen that strong involvement in CSCL research generally requires policy initiatives backed up with funding commitments. The European Union Network of Excellence funding programs like Kaleidoscope and Stellar have made a significant difference. NSF support for educational research has helped in the USA as well. Case studies elsewhere underline this factor (Chan, 2011; Looi et al., 2011).

A Delphi survey of researchers and stakeholders in technology-enhanced learning recently ranked CSCL as the second most important core research area for the next decade—just behind “connection between informal and formal learning” and ahead of nine other areas, like “personalized learning” (Kaendler et al., these Proceedings, Vol. II). We hope this recognition will spread around the world. In order to address the challenges facing CSCL in the coming years—not least of which are those related to practice and policy—we need the combined efforts of a global collaborative effort. Such an effort would bring together the unique perspectives of many labs and diverse educational cultures, acknowledging and strengthening their individual perspectives while incorporating them into a global synthesis.

## **Volume I: CSCL 2011 Long Papers**

Volume I of the Proceedings includes the papers that were accepted through peer review for presentation as long papers. These papers were submitted in November 2010 and were reviewed by three anonymous reviewers. A member of the Program Committee then summarized the three reviews and wrote a recommendation. The three Program Committee Co-Chairs considered the reviews and recommendations—and in many cases read the papers. Based on this, they agreed on a list of 72 submissions to accept as long papers, grouping them into 18 sets of 4 thematically related papers that could be presented in the scheduled long-paper sessions. Out of 188

submissions of long papers, 72 (38%) were accepted as long papers, 45 (24%) as short papers, 48 (26%) as posters and 23 (12%) were rejected.

## **Volume II: CSCL 2011 Short Papers and Posters**

Volume II of the Proceedings includes the papers that were accepted through peer review for presentation as short papers or posters. Submissions for short papers or posters went through exactly the same review process as long papers. Out of 52 submissions of short papers, 17 (33%) were accepted as short papers, 26 (50%) as posters and 9 (17%) were rejected. Out of 38 submissions of posters, 26 (68%) were accepted as posters and 12 (32%) were rejected. Short papers were grouped into sets of 5 thematically related papers. Authors of short papers give very brief presentations and then conduct round-table discussions of their papers with interested audience members. Posters were assigned to two poster sessions; authors of posters hang large-scale posters on walls and then discuss them with interested audience members.

## **Volume III: CSCL 2011 Pre-Conference, Keynotes, Symposia and Post-Conference**

Volume III of the Proceedings includes summaries of other events at CSCL 2011.

The pre-conference events include workshops, tutorials, a Doctoral Consortium and an Early Career Workshop. There are three tutorials on tool support for analysis, social network analysis and the WISE environment. There are four workshops on orchestrating CSCL in the classroom, connecting levels of learning and synthesizing three approaches to CSCL design.

The highlights of this year's conference include keynote talks by prominent speakers: Dr. Gwang-Jo Kim, Director of UNESCO Regional Bureau for Education in Asia-Pacific; Dr. Ed H. Chi, Research Scientist, Google Research; Prof. Erik Duval, Professor of Computer Science, Katholieke Universiteit Leuven, Belgium; and Prof. Roy Pea, Stanford University Professor of the Learning Sciences and Director of the Stanford Center for Innovations in Learning. The keynotes cover the full range of issues from researcher, policy-maker and practice perspectives.

Out of 17 proposals for symposia, 14 (82%) were accepted and 3 (18%) were rejected. This high acceptance rate of symposia is a result of the fact that most of them had been carefully filtered by large groups of organizers. The submissions were generally of exceptional quality and represented important and timely themes that are of current high relevance to the field. They often reflect important centers of CSCL research in different regions of the world or international collaborations. In order to avoid having these symposia draw audiences away from long and short paper sessions, the symposia were mostly scheduled against each other.

The practitioner-oriented sessions take place in parallel with the paper and symposium sessions of the main conference. They include a wide variety of presentations and events that are designed for classroom teachers and others particularly interested in the applications of CSCL research and their use in the classroom. This strand of activities showcases design research in CSCL involving field-based educators and/or strong university-school partnerships. These events are of interest and benefit to teachers and other practitioners, as well as researchers and educators interested in models and exemplars of research and practice interaction and partnership. They are listed in the conference Program.

The post-conference consists of a series of conference activities to be held in Shanghai, Guangzhou and Beijing in China. It builds on the conference theme of connecting CSCL research to education policy and practice. It draws on national and global exemplars of synergistic advances in CSCL and learning sciences research and educational policy and practice to explore the current state and the way forward for education developments in China. This series of post-conference activities brings together researchers, practitioners and policy-makers within China and internationally to identify ways to better leverage the potentials that research on learning and learning technologies bring to educational change and improvement.

## **Hong Kong University Centenary**

The CSCL 2011 conference coincides with a major local milestone as well as an advance of the CSCL community. A century ago, in 1911, the University of Hong Kong was incorporated by Ordinance. A group of visionaries founded the first university in Hong Kong, from which generations of leaders across the region would come forth. The University of Hong Kong was to be important for China and for the world. In celebrating the first centenary, HKU upholds its commitment to Knowledge, Heritage and Service. The Centre for Information Technology in Education (CITE) of the Faculty of Education is proud to be hosting the CSCL 2011 main conference and co-organizing the CSCL 2011 post-conferences in three Mainland Chinese cities as part of the HKU Centenary celebration events.

## References

- Chan, C. (2011). CSCL theory-research-practice synergy: The Hong Kong experience of implementing knowledge building in classrooms. *International Journal of Computer-Supported Collaborative Learning*. 6(2). Doi: <http://dx.doi.org/10.1007/s11412-011-9121-0>.
- Kienle, A., & Wessner, M. (2006). The CSCL community in its first decade: Development, continuity, connectivity. *International Journal of Computer-Supported Collaborative Learning*. 1(1), 9-33. Doi: <http://dx.doi.org/10.1007/s11412-006-6843-5>.
- Looi, C.-K., So, H.-j., Toh, Y., & Chen, W. (2011). CSCL in classrooms: The Singapore experience of synergizing policy, practice and research. *International Journal of Computer-Supported Collaborative Learning*. 6(1), 9-38. Doi: <http://dx.doi.org/10.1007/s11412-010-9102-8>.