ICLS 2006 Pre-Conference Workshop

Interaction & Learning in Chat Environments: A Workshop with Data Sessions

I. SUBMISSION INFORMATION

WORKSHOP TITLE:	Interaction & Learning in Chat Environments: A Workshop with Data Sessions
PROPOSER(S) NAME AND AFFILIATION	Gerry Stahl and Alan Zemel Virtual Math Teams Project The Math Forum @ Drexel College of Information Science & Technology Drexel University Philadelphia, USA
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II. BRIEF DESCRIPTION

Provide a brief description (75 words maximum) that will appear on the ICLS registration website.

Research groups around the world are using approaches inspired by Conversation Analysis to explore the processes of sense-making peculiar to textual exchanges mediated by chat technology. Such Chat Analysis allows researchers to observe the opportunities for and barriers to collaborative learning created by chat environments with various functionality. This day-long workshop will consist primarily of group data sessions analyzing chat logs, but will also consider theoretical and methodological implications for the study of computer support in the learning sciences.

IV. AUDIENCE DESCRIPTION

Estimated attendees: 20

Describe the target audience:

(1) Researchers and students in the learning sciences who are interested in how technology mediates small-group interaction, collaboration and learning.

(2) Researchers and students interested in the use of Conversation Analysis methodology in situations of technology mediated learning.

(3) Researchers and students interested in the use of chat environments for collaborative learning.

V. LENGTH AND PREFERRED TIME

The morning workshops session is from 9:00 to 12:00 or12:30 with a break from 10:30-11:00. The lunch break is 12:30-2:00. The afternoon session is from 2:00 to 5:30 with a break from 3:30-4:00. Please indicate whether your preferred time by rank ordering the slots below. If you are proposing a whole day proposal or will only consider a single slot for the half day, just select a single slot

__1__ Tuesday Full Day (9-5:30)
__3__ Tuesday Half-Day Morning (9-12:30)
__2__ Tuesday Half-Day Afternoon (2-5:30)
__4__ Wednesday Half-Day Morning (9-12:00)

VI. PROPOSAL

Data sessions in which a workshop of people analyze the sequential unfolding of small-group interaction and sense-making as captured in a brief video clip, transcript or computer log are part of a methodology that is increasingly recognized to be of importance in the learning sciences (Stahl, Koschmann, & Suthers, 2006). The approach is based on ethnomethodologically-inspired conversation analysis, interaction analysis or video analysis (Garfinkel, 1967; Jordan & Henderson, 1995; Koschmann, Stahl, & Zemel, 2004; Sacks, 1992). Workshops centered on data sessions have been successfully held at CSCL 2002, ICLS 2002, CSCL 2003 and CSCL 2005.

Instant messaging, SMS and chat are widely popular among students for socializing one-on-one. In principle, chat technology has the potential to support many-to-many communication for collaborative learning activities, overcoming the requirements of face-to-face interaction for turn-taking and physical presence. However, active chat sessions involving more than three or four participants become confusing and straining (Pimentel, Fuks, & Lucena, 2005). To overcome the barriers to using chat for collaborative learning and to more specifically characterize its potential opportunities requires understanding the "systematics" of chat-based interaction – in analogy with the analysis conducted of turn-taking in informal spoken conversation (Sacks, Schegloff, & Jefferson, 1974).

We conceptualize the patterns of interaction that we observe in data sessions as *methods*. We adopt the general approach of conversation analysis, but we must make many adaptations for differences including the following:

- Chat log data consists of messages that are typed, not spoken.
- The participants are not face-to-face.
- Only completed messages are posted; the halting process of producing the messages is not observable by message recipients (Garcia & Jacobs, 1998, 1999).
- The messages are displayed in a particular software environment and the messages are designed by their posters to be read and responded to in that environment (Livingston, 1995; Zemel, 2005).
- The textual messages are persistent.
- Several participants may be typing messages at the same time, and the order of posting these messages may be unpredictable by the participants (Cakir *et al.*, 2005).

Data sessions drawing on a diverse corpus of chat logs are an important step in developing a systematics of student methods of interacting and learning in chat environments.

VII. Syllabus

This workshop will consist of a series of data sessions analyzing logs from settings of computer-mediated collaborative learning. They will include chat sessions and other forms of computer mediation. The data will be presented by researchers from labs around

the world, such as Fuks' research group in Brazil, Wessner's in Germany, Lonchamp's in France, Suthers' in Hawaii, Säljö and Lindström's in Sweden, Wasson and Ludvigsen's in Norway and Stahl and Zemel's in Philadelphia. Following the data sessions, there will be a discussion of theoretical and methodological implications. Steps toward an ijCSCL journal special issue and/or a CSCL-series edited volume on interaction in chat will be considered.

VIII. Instructional Staff

The workshop will be organized and facilitated by the research team of the Virtual Math Teams (VMT) Project at Drexel University. The team has produced a series of publications analyzing interaction and learning in chat environments (Cakir *et al.*, 2005; Cakir, Sarmiento, & Stahl, 2006; Sarmiento, Trausan-Matu, & Stahl, 2005a, 2005b; Sarmiento, Cakir, & Stahl, 2006; Sarmiento, Stahl, & Weimar, 2006; Stahl & Carell, 2004; Stahl, 2005a, 2005b, 2005c, 2005d, 2005e, 2005f, 2006b, 2006c; Stahl *et al.*, 2006).

The Director of the VMT project is Gerry Stahl, Associate Professor of Information Science, Executive Editor of the *International Journal of Computer-Supported Collaborative Learning* and author of *Group Cognition: Computer Support for Building Collaborative Knowledge* (Stahl, 2006a).

The post-doc on the VMT project is Alan Zemel. Dr. Zemel is trained in Conversation Analysis and was previously part of the Deixis Project directed by Timothy Koschmann (Zemel & Koschmann, 2005; Zemel, Xhafa, & Cakir, 2005; Zemel, Xhafa, & Stahl, 2005).

IX. Audiovisual Equipment

No special needs.

X. References

Cakir, M., Xhafa, F., Zhou, N., & Stahl, G. (2005). *Thread-based analysis of patterns of collaborative interaction in chat.* Paper presented at the international conference on AI in Education (AI-Ed 2005), Amsterdam, Netherlands.

Cakir, M., Sarmiento, J., & Stahl, G. (2006). *Shared deictic referencing in online mathematics discourse.* Paper presented at the Ethnography in Education annual conference 2006, Philadelphia, PA.

Garcia, A., & Jacobs, J. B. (1998). The interactional organization of computer mediated communication in the college classroom. *Qualitative Sociology, 21* (3), 299-317.

Garcia, A., & Jacobs, J. B. (1999). The eyes of the beholder: Understanding the turn-taking system in quasi-synchronous computer-mediated communication. *Research on Language and Social Interaction, 34* (4), 337-367.

Garfinkel, H. (1967). *Studies in ethnomethodology*. Englewood Cliffs, NJ: Prentice-Hall.

Jordan, B., & Henderson, A. (1995). Interaction analysis: Foundations and practice. *Journal of the Learning Sciences, 4* (1), 39-103. Retrieved from http://lrs.ed.uiuc.edu/students/c-merkel/document4.HTM.

Koschmann, T., Stahl, G., & Zemel, A. (2004). *The video analyst's manifesto (or the implications of Garfinkel's policies for the development of a program of video analytic research within the learning sciences).* Paper presented at the International Conference of the Learning Sciences (ICLS 2004), Los Angeles, CA.

Livingston, E. (1995). *An anthropology of reading*. Bloomington: IN: Indiana University Press.

Pimentel, M., Fuks, H., & Lucena, C. (2005). *Mediated chat development process: Avoiding chat confusion on educational debates.* Paper presented at the international conference of Computer Support for Collaborative Learning (CSCL 2005), Taipei, Taiwan.

Sacks, H., Schegloff, E. A., & Jefferson, G. (1974). A simplest systematics for the organization of turn-taking for conversation. *Language, 50* (4), 696-735. Retrieved from www.jstor.org.

Sacks, H. (1992). *Lectures on conversation*. Oxford, UK: Blackwell.

Sarmiento, J., Trausan-Matu, S., & Stahl, G. (2005a). *Co-constructed narratives in online, collaborative mathematics problem solving.* Paper presented at the international conference on AI in Education (AI-Ed 2005), Amsterdam, Netherlands.

Sarmiento, J., Trausan-Matu, S., & Stahl, G. (2005b). *Dialogical perspectives on narratives in collaborative mathematics problem-solving.* Paper presented at the International Symposium on Organizational Learning and Knowledge Work Management (OL-KWM 2005), Bucharest, Romania. Proceedings pp. 88-99.

Sarmiento, J., Cakir, M., & Stahl, G. (2006). *Studying the referencing of mathematical objects in online collaborative problem solving.* Paper presented at the Ethnography in Education, Philadelphia, PA.

Sarmiento, J., Stahl, G., & Weimar, S. (2006). *Assessing mathematical thinking from online, collaborative problem-solving.* Paper presented at the Conference of the National Council of Teachers of Mathematics (NCTM 2006), St. Louis, MO.

Stahl, G., & Carell, A. (2004). Kommunikationskonzepte [the role of communication concepts for CSCL pedagogy]. In J. Haake, G. Schwabe & M. Wessner (Eds.), *CSCL-kompendium* (pp. 229-237). Frankfurt, Germany: Oldenburg. Retrieved from http://www.cis.drexel.edu/faculty/gerry/publications/journals/rolle.pdf.

Stahl, G. (2005a). *Group cognition in online collaborative mathematics problem solving.* Paper presented at the 11th Biennial Conference of the European Association for Research on Learning and Instruction (EARLI 2005), Nicosia, Cyprus.

Stahl, G. (2005b). *Group cognition: The collaborative locus of agency in CSCL.* Paper presented at the international conference on Computer Support for Collaborative Learning (CSCL '05), Taipei, Taiwan. Proceedings pp. 632-640.

Stahl, G. (2005c). Group cognition in computer assisted learning. *Journal of Computer Assisted Learning*. Retrieved from http://www.cis.drexel.edu/faculty/gerry/publications/journals/JCAL.pdf.

Stahl, G. (2005d). *Sustaining online collaborative problem solving with math proposals (winner of best paper award).* Paper presented at the International Conference on Computers and Education (ICCE 2005), Singapore, Singapore. Proceedings pp. 436-443.

Stahl, G. (2005e). *Groups, group cognition & groupware (keynote).* Paper presented at the International Workshop on Groupware (CRIWG 2005), Racife, Brazil.

Stahl, G. (2005f). *Group cognition in chat: Methods of interaction / methodologies of analysis.* Paper presented at the Kaleidoscope CSCL SIG Workshop on Analysis of Interaction and Learning (NAIL 2005), Gothenburg, Sweden.

Stahl, G. (2006a). *Group cognition: Computer support for building collaborative knowledge*. Cambridge, MA: MIT Press. Retrieved from http://www.cis.drexel.edu/faculty/gerry/mit/.

Stahl, G. (2006b). Preface: Engaging with engaged learning. In D. Hung & M. S. Khine (Eds.), *Engaged learning with emerging technologies* (pp. i-v). Boston: Springer. Retrieved from http://www.cis.drexel.edu/faculty/gerry/publications/journals/Engagement.pdf.

Stahl, G. (2006c). Scripting group cognition: The problem of guiding situated collaboration. In F. Fischer, H. Mandl, J. Haake & I. Kollar (Eds.), *Scripting computer-supported collaborative learning: Cognitive, computational and educational perspectives*. Dodrecht, Netherlands: Kluwer-Springer Verlag.

Stahl, G., Koschmann, T., & Suthers, D. (2006). Computer-supported collaborative learning. In R. K. Sawyer (Ed.), *Cambridge handbook of the learning sciences*. Cambridge, UK: Cambridge University Press.

Zemel, A. (2005). *Texts-in-interaction: Collaborative problem-solving in quasi-synchronous computer-mediated communication.* Paper presented at the International Conference of Computer-Supported Collaborative Learning (CSCL 05), Taipei, Taiwan.

Zemel, A., & Koschmann, T. (2005). *Understanding-as-participation: A single case analysis of a problem-based learning meeting.* Paper presented at the International Institute for Ethnomethodology and Conversation Analysis Conference (IIEMCA 2005), Waltham, MA.

Zemel, A., Xhafa, F., & Cakir, M. (2005). *What's in the mix? Combining coding and conversation analysis to investigate chat-based problem-solving.* Paper presented at the 11th Biennial Conference of the European Association for Research on Learning and Instruction (EARLI 2005), Nicosia, Cyprus.

Zemel, A., Xhafa, F., & Stahl, G. (2005). *Analyzing the organization of collaborative math problem-solving in online chats using statistics and conversation analysis.* Paper presented at the CRIWG International Workshop on Groupware, Racife, Brazil.