

Discourse Analysis of Collaborative Meaning Making in CSCL

Shaoming Chai, Jianhua Zhao, Su Mu, South China Normal University, Guangzhou, Guangdong China
Email: charming2000@hotmail.com, jhuazhao@gmail.com, liza_mu@126.com

Abstract: Meaning making is the central to CSCL. This paper proposed to use socio-cultural discourse analysis to study this process. Based on one case study, the paper analyzed the group discourse and identified the five types of discourse. The study showed that this method can be applied to analyze the collaborative learning and meaning making involves different types of discourse acts and they are interweaved into the group discussion and together contribute to the group product.

Introduction

Computer-supported collaborative learning (CSCL) is an emerging branch of the learning sciences concerned with studying how people can learn together with the help of computers (Stahl, Koschmann & Suthers, 2006). Experts at the three international CSCL conferences all emphasized the centrality of the analysis of meaning making to the study of collaboration and proposed that analysis of meaning making should become the focus of collaborative learning research.

CSCL takes a new constructivism and socio-cultural view of learning and views learning is inherently a social, dialogical process in which learners benefit most from being part of knowledge-building communities both in class and outside of school (Jonassen, 1995). In CSCL learners negotiate meaning mainly through language and they engage in group dialogue to establish interpersonal relationship and common ground. It is through discourse that learners construct their knowledge, express their opinions, values and feelings. So examining their talk and text is crucial in order to get at how meaning is constituted locally, we need to focus on the discourse taking place in computer-mediated communication to explore how the group members are engaged in the discourse to negotiate meaning and reach the share understanding by analyzing the discourse.

Research Method and Case

This paper will employ a sociocultural perspective of discourse analysis to analyze the process of collaborative learning. Discourse analysis from socio-cultural perspective is appropriate for our analysis of meaning making in CSCL as it roots in Vygotsky socio-cultural theory (Chai & Li, 2009). It conceives discourse to be interactional actions, laying stress on the social functions of language. From socio-cultural perspective, discourse is situated, action-oriented and constructed (Edwards & Potter, 2001). The analysis should focus on the context, form, meaning and function of the discourse. As discourse performs actions, the researchers need to examine what the participants use language to do, how the meaning is constructed, what the language evidence are and what is related to research question. These questions can help the researcher to analyze the discourse in CSCL to explore the types of discourse, the function of discourse to see how learners negotiate the meaning and solve the problems.

The case was selected from online course discussion in a joint international educational research project "e-China-UK on intercultural professional development. This project involved inter-cultural collaboration between UK and Chinese universities aimed to provide a shared experience in discussing and experiencing e-learning in order to share intercultural perceptions in dialogical and critical collaborative learning settings between the teachers who worked in e-learning fields. The course was delivered via Moodle and lasted 14 weeks. The course consisted induction and three units, and it adopted project-based learning. The group members first got to know each other and tried to build online community and then decide a common topic or problem for group discussion. They needed to explore the topic or solve the problem and worked out a group product. The group discussion data were copied into notepad and saved it as new file for analysis.

Findings and Conclusion

By examine and coding the discourse data in group discussion, I identified the following five types of discourse, and their functions and relevant speech act are showed in the following table.

Table 1: Types of discourse in group discussion.

Type of discourse	Speech act	Function of discourse
Information sharing discourse	Share/ add/give/link resources or ideas	Share the resource and ideas and build a common ground for further discussion.

Exploratory discourse	Ask questions/offer ideas/give comments	Explore the problems by asking questions, offering opinions or evaluations.
Negotiative discourse	Agree/disagree with the ideas	Negotiate the meaning by building on each other's ideas with constructive features
Integrative discourse	Summarize /integrate the main points	Integrate or summarize the main points to make the discussion coherent.
Product-based discourse	Evaluate the product/offer the suggestions/	Discuss how to produce the group work collaboratively

All these five types of discourse occurred in six group discussion and it is through these discourses the participants shared the information, explored the problem, negotiated the meaning and integrated the main points and finally they collaboratively produced a group work by engaging in product-based discourse.

We selected a sample session of group discussion on forum to examine the details of group discourse process to see how they make meaning with the types of discourse as analytical framework. The context for this period of discourse was the group had decided the topic and began to discuss the relevant problems. The analysis showed that when group members participated in group learning, they were engaged in different types of discourse. The group interaction involved asking, clarifying, and proposing discourse acts to explore the question and negotiate the meaning. And their interaction was not one-to-one turn but one to two, or three or all group members. And the discourse was not linear, but took on the multi-directional thread. We can see the group members all actively participated in the discussion and contributed their ideas to the shared problem. And they made the meaning and reached the shared understanding.

How did the group collaborative work out the product? Or how did they make the share knowledge artifacts? When the group members discussed the topic, one learner proposed to use Google docs as an editing tool for their collaborative writing. And the other members took his suggestion and then they began their group work in two spaces, one in group discussion forum in Moodle and one was Google Docs. Here both the discussion forum and Google Docs were mediating tool to support the group's collaborative learning. When they engaged in collaborative writing the group work, each member contributed their ideas to the work. The key words "everyone, our, we, us" and addressors indicated that they were engaged in a group work instead of individual job. And the participants could give some comments to others' texts and could modify or add more ideas to them. And the discourse showed that the group members were collaboratively making meaning and building the shared understanding. The group work was the knowledge artifact that embodies their discourse product. And in fact Google docs could record the collaborator's revision history, including what he or she added, or modified, or commented. From the history revision, we can see the process of the collaborative writing. The product was not the sum of each individual member's contribution, but the result of collaborative work. Discourse analysis of a sample of the group discourse also showed how they collaborative created common ground for group work, built up each other's ideas and produced the shared knowledge artifact.

The study concluded that this method can be applied to analyze the collaborative learning and meaning making involves different types of discourse acts and they are interweaved into the group discussion and together contribute to the group product.

References

- Chai Shaoming & Li Kedong . (2009). Discourse analysis-a new approach to study collaborative meaning making in CSCL. *Modern Educaitional Technology*, 2, 79-82.
- Edwards, D & Potter, J. Discursive psychology. (2001). In A. McHoul & M. Rapley (Eds.) *How to analyze talk in institutional settings . A casebook of methods* (pp.25-38). London: Continuum.
- Jonassen, D. (1995). Learning with technology: using computers as cognitive tools. In D. H. Jonassen (Ed.), *Handbook of research on Educational communication and technology*(PP.693-719). New York: Scholastic Press.
- Stahl, G., Koschmann, T. & Suthers, D. (2006). Computer-supported collaborative learning: An historical perspective. In R. K. Sawyer (Ed.), *Cambridge handbook of the learning sciences* (pp.409-426). Cambridge, UK: Cambridge University Press.

Acknowledgments

I would like to show my gratitude to all the colleagues in E-china-UK project who contributed to the online course design and implementation especially online discussion. This paper is funded by the key discipline construction of "211" project from Guangdong province, China.