

Sociocultural Theory and Computer-Mediated Communication-based Language Learning

Heesook Cheon

Teachers College, Columbia University

Computer-Mediated Communication (CMC) refers to “communication that takes place between human beings via [networked] computers” (Herring, 1996), which includes both synchronous modes (e.g., real-time chat and video-conferencing) and asynchronous modes (e.g., e-mails and bulletin boards). This new type of communication is now widely used in foreign language learning and teaching either in the form of telecollaboration (class-to-class collaboration) or tandem learning (student-to-student collaboration). The studies on CMC-based language learning, on the whole, have been framed within the Interactionist theory; however, recently, prompted by the suggestion of the sociocognitive approach to the study of CMC (Kern & Warschauer, 2000; Chapelle, 2001), the frameworks used in researching CMC have been expanded to include Sociocultural theory. The sociocultural frameworks for CMC-based language learning, by and large, are based on the claims of scholars calling for sociocultural approaches to second language (L2) and foreign language (FL) learning (Block, 2003; Donato, 2000; Lantolf, 2000; Lantolf & Thorne, 2006; Ohta, 2001).

According to a sociocultural perspective on L2/FL learning, social interaction is considered an integral process in language learning. This perspective is based on Vygotskian sociocultural theory, which claims that human cognition is formed through social activity. In this view, learning an L2 or FL is understood as a semiotic process attributable to participation in social activities rather than internal mental processes solely by the individual (Block, 2003; Lantolf, 2000; Lantolf & Thorne, 2006). In other words, learners acquire a language by using that language in social interaction with speakers of that language. The sociocultural approach to L2/FL learning, thus, calls for broadening the context of social interaction from a classroom setting to intercultural communication (Kinginger, 2004; Thorne, 2006). Especially in foreign language classrooms, however, learners have limited social interaction with their teacher or peers in their target language since that language is not used as a means of communication among them outside or even inside classrooms. CMC meets the need for increasing opportunities for social interaction beyond classroom by networking foreign language learners in different locations. The application of global networks to foreign language education enables the internationally dispersed learners to engage in various social activities by using CMC tools such as emails, real-time chat, threaded discussion, and video conferencing.

Another key notion crucial to the sociocultural approach to L2/FL learning is that the potential of cognitive development is limited to the zone of proximal development (ZPD), which is defined as the zone of potential in which an individual can achieve more with assistance than s/he can do alone. This notion provides important implications for the quality of social interaction since learning is linked to development only in the ZPD. The ZPD is created primarily through expert-novice interaction, but peer interaction as well because different levels of expertise of the individuals involved in peer interaction can create various ZPDs amongst them (Donato, 2000; Ohta, 2001). Then, how can CMC create the ZPD? The global networks which utilize CMC in foreign language education enable two learners of different native languages to work together with

the goal of learning their partner's language and culture, and this context creates expert-novice dyads in learning each language and culture. In this view, peer interaction through CMC is regarded as an important way to facilitate individual second/foreign language development.

The third concept crucial to the sociocultural framework for CMC-based language learning is scaffolding. This metaphor shows how a more capable participant can dialogically create the ZPD in which a novice learner can extend current skills and knowledge to higher levels of competence. Scaffolding is conceived not as unidirectional delivery of assistance from an expert to a novice, but as bilateral construction of assistance. This notion of scaffolding acknowledges the benefits of peer interaction for L2 development by supporting the idea that expertise may be distributed among individuals rather than residing in one individual. The empirical studies on scaffolding in L2 learning have shown how learners working together reach a higher level of performance by providing assistance to one another (Donato, 1994; Swain & Lapkin, 1998; Ohta, 2000, 2001). In these studies, scaffolding in peer interaction is considered to be the mechanism by which novice learners become experts. These studies provide important implications for L2 learning environments, particularly with regard to the value of the unique context generated by pair work via CMC between two learners of different native languages who are learning their partner's language and culture. Both partners depend on each other since each partner is an expert in his or her first language (L1) and culture (C1) and at the same time a novice in his or her second language (L2) and culture (C2). In this context, each learner takes the roles of expert and novice alternatively, which builds a collaborative process through which assistance is provided from learner to learner such that each learner is enabled to perform something s/he might not have been able to do alone.

To sum up, a sociocultural approach to second/foreign language learning places great significance on the role of the interpersonal and interactive environment. Particularly, the notions of the ZPD and scaffolding assign an important role to peer assistance by addressing the quality of interaction and assistance. Therefore, in second/foreign language pedagogy, it is very important to create an interactive learning environment in which learners can associate with each other and construct their L2 performance collaboratively through peer assistance. Recent studies have shown that pair work via CMC across languages and cultures can provide such an interactive and collaborative learning environment (Belz, 2003; Belz & Kinginger, 2002, 2003; Belz & Müller-Hartmann, 2003; Chung, Graves, Wesche, & Barfurth, 2005; Kötter, 2003). Given that social interaction is considered an integral process in language learning, CMC-based language learning suggests a way of fostering language learners' social interaction for second/foreign language classrooms where learners have limited or minimal interaction with their instructor or peers.

REFERENCES

- Belz, J. A. (2003). Linguistic perspectives on the development of address form use in telecollaborative language learning: Two case studies. *Canadian Modern Language Review*, 59, 189-214.
- Belz, J. A., & Kinginger, C. (2002). The cross-linguistic development of intercultural competence in telecollaboration. *Language Learning & Technology*, 7(2), 68-117.
- Belz, J. A., & Kinginger, C. (2003). Discourse options and the development of pragmatic competence by classroom learners of German: The case of address forms. *Language Learning*, 53, 591-647.

- Belz, J. A., & Müller-Hartmann, A. (2003). Teachers as intercultural learners. Negotiating German-American telecollaboration along the institutional fault line. *The Modern Language Journal*, 87, 71-89.
- Block, D. (2003). *The social turn in second language acquisition*. Washington, DC: Georgetown University Press.
- Chapelle, C. (2001). *Computer applications in second language acquisition; Foundations for teaching, testing, and research*. Cambridge, UK: Cambridge University Press.
- Chung, Y., Graves, B., Wesche, M., & Barfurth, M. (2005). Computer-mediated communication in Korean-English chat rooms: Tandem learning in an international language program. *The Canadian Modern Language Review*, 62, 49-86.
- Donato, R. (1994). Collective scaffolding in second language learning. In J. P. Lantolf & G. Appel (Eds.), *Vygotskian approaches to second language research* (pp. 33-56). Norwood, NJ: Ablex.
- Donato, R. (2000). Sociocultural contributions to understanding the foreign and second language classroom. In J. Lantolf (Ed.), *Sociocultural theory and second language learning* (pp. 27-50). Oxford, UK: Oxford University Press.
- Herring, S. (1996). Computer-mediated communication: Linguistic, social, and cross-cultural perspectives. Amsterdam: John Benjamins.
- Kern, R., & Warschauer, M. (2000). Theory and practice of networked-language teaching. In M. Warschauer & R. Kern (Eds.), *Network-based language teaching: Concepts and practice* (pp. 1-19). Cambridge, UK: Cambridge University Press.
- Kinginger, C. (2004). Communicative foreign language teaching through telecollaboration. In K. van Esch & O. St. John (Eds.), *New insights into foreign language learning and teaching* (pp. 101-113). Frankfurt, Germany: Peter Lang.
- Kötter, M. (2003). Negotiation of meaning and codeswitching in online tandems. *Language Learning and Technology*, 7(2), 145-172.
- Lantolf, J. P. (2000). *Sociocultural theory and second language learning*. Oxford, UK: Oxford University Press.
- Lantolf, J. P., & Thorne, S. L. (2006). *Sociocultural theory and the genesis of second language development*. Oxford, UK: Oxford University Press.
- Ohta, A. (2000). Rethinking interaction in SLA: Developmentally appropriate assistance in the zone of proximal development and the acquisition and L2 grammar. In J. Lantolf (Ed.), *Sociocultural theory and second language learning* (pp. 51-78). Oxford, UK: Oxford University Press.
- Ohta, A. (2001). *Second language acquisition processes in the classroom: Learning Japanese*. Mahwah, NJ: Lawrence Erlbaum.
- Swain, M., & Lapkin, S. (1998). Interaction and second language learning: Two adolescent French immersion students working together. *The Modern Language Journal*, 82, 320-337.
- Thorne, S. T. (2006). Pedagogical and praxiological lessons from internet-mediated intercultural foreign language education research. In J. Belz & S. Thorne (Eds.), *Internet-mediated intercultural foreign language education* (pp. 2-30). Boston, MA: Thomson & Heinle.

Heesook Cheon is a doctoral student in the Applied Linguistics program at Teachers College, Columbia University. Her research interests include CALL, CMC-based language learning and teaching, second/foreign language pedagogy, and analysis of on-line discourse.