

## REVIEW OF *ELECTRONIC COLLABORATORS: LEARNER-CENTERED TECHNOLOGIES FOR LITERACY, APPRENTICESHIP, AND DISCOURSE*

### Electronic Collaborators: Learner-Centered Technologies for Literacy, Apprenticeship, and Discourse

Curtis Jay Bonk and Kira S. King, (Eds.)

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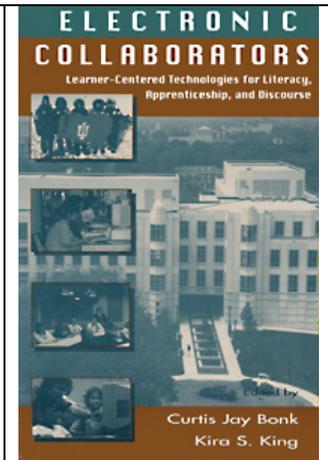
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#### Review by Joseph Collentine, Northern Arizona University

Textual electronic collaboration provides language learners today with several contexts for employing and improving their second-language (L2) abilities, including electronic mail, delayed conferencing tools such as [Blackboard](#) and [WebCT](#), and real-time brainstorming and chat solutions. Researchers specifically interested in L2 acquisition and pedagogy have just begun to explore the potential effects of telecollaboration (see [Belz, 2003](#)). The edited volume *Electronic Collaborators: Learner-Centered Technologies for Literacy, Apprenticeship, and Discourse* (Bonk & King, 1998) explores the contribution of Sociocultural Theory (e.g., Vygotsky, 1978) to providing instructional premises upon which to base collaborative learning tasks. The text's audience is educators in general, such that its implications for second-language acquisition (SLA) will require the creativity of L2 researchers themselves. All told, the volume provides a solid theoretical foundation for investigators to consider, although most of the volume's research projects lack several important quality controls of research design.

The strength of this volume is its potential for offering SLA investigators with insights into designing research on the effects of electronic collaboration seen through a sociocultural lens. Of course, the sociocultural perspective is far from new to SLA. Researchers such as Lantolf (Lantolf, 1994, 2000; Lantolf & Appel, 1994) approach the study of SLA as a social semiotic construct to gauge what learners are acquiring by documenting the communicative systems (e.g., the new words that they come to understand, the morphosyntactic strategies that emerge from a collaborative task) that result from mentorship and interpersonal communication. Still, SLA researchers have mostly sought to understand the implications of sociocultural theory in negotiations of meaning in speech. An important finding of this research is that the developmental "products" that students attain from interpersonal communication are often as unique as the conditions under which such negotiations of meaning occur (e.g., formal classrooms, study abroad settings, immersion settings; see Kramsch, 2000). Therefore, to the extent that electronic collaboration will become an increasingly important learning tool in academic environments, it behooves L2 researchers to understand the unique products that may arise out of digital negotiations of meaning. To be sure, Kötter (2003) recently reports that many of the interactional features that researchers have identified as potential agents of acquisition in speech also occur in electronic interactions; furthermore, he also reports that novel modes of communication arise in electronic L2 collaboration.

*Electronic Collaborators* is divided into five sections, the first of which provides a theoretical context for the research projects that follow. The editors, Bonk and King, layout the territory (in chapter 1) for the new comers to the field of telecollaboration. They outline the various types of electronic collaboration that teachers have at their disposal and how these media are used in the classroom. Bonk and Cunningham (chapter 2) follow with an insightful and exhaustive treatment of the history of "learner-centered instruction" and how electronic collaboration has become synonymous with constructivist and sociocultural perspectives on learning theory. Duffy, Dueber, and Hawley (chapter 3) list out complete this section by exploring various definitions of so-called "critical thinking" pedagogies and how their objectives can be achieved in distributed learning environments.

The volume's second section (chapters 4 and 5) explores the value of stand-alone collaborative systems, where pairs or groups of students team up at a single workstation to produce a product or solve a problem. SLA researchers will be interested in the models that the studies in this section provide since the articles show how students co-construct a meaningful dialogue or co-produce extended discourse digitally, both of which result from adherence to a shared set of goals and interaction a revision process. The third section contains studies examining the effects of asynchronous communication between students. In posting environments such as the [World Forum](#), the investigators explore the efficacy of activities such as historical role-plays, teacher-student scaffolding for the sake of concept attainment, as well as how asynchronous computer interaction can enhance learning in large-section (university) classes. The fourth section examines learning environments that combine asynchronous with synchronous learning solutions in various educational settings, such as chat technologies, white boards, and knowledge/concept maps that learners construct in real time. The final section of the volume critically examines the research presented in *Electronic Collaborators* and provides directions for future research efforts.

The volume will be a productive read for SLA investigators who are curious about the effects of electronic collaboration especially if they seek to provide sociocultural perspectives. The theoretical implications of Vygotsky's work are alluded to throughout the volume, and L2 savvy investigators will find much food for thought in designing research projects focusing on L2 electronic collaboration as well as food for thought for interpreting the results obtained. By way of example, Sugar and Bonk (chapter 6, "Student Role Play in the World Forum: Analyses of an Arctic Adventure Learning Apprenticeship") report a study of middle-school students who role play various historical figures on an Arctic expedition, debating environmental issues with delayed computer conferencing software. These authors meticulously reveal how the learners accomplished the primary objectives of Bloom's (infamous) "taxonomy of educational objectives" with asynchronous electronic collaboration.

SLA researchers will, nonetheless, need to complement this read with SLA specific literature to provide the types of accounts of learning and quality controls on research design that our particular field expects. In the research presented in *Electronic Collaborators*, investigators focus on measuring whether or how much students' critical thinking is being engaged in a particular activity or learning context like asynchronous conferencing; whether this type of learning behavior leads to greater attainment of content knowledge (e.g., about trends in history, elementary principles of the physical world) is not the focus of the research presented here. However, an issue that is unavoidable in the study of SLA is whether the student actually is progressing in his or her L2 abilities irrespective of whether s/he is exhibiting, for example, problem-solving strategies in a language task (Long, 1997; see Firth & Wagner, 1997 for a counter perspective). In this regard, the volume does not offer SLA researchers with models for gauging either the overall progress of a group of learners or more focused progress (e.g., on a particular grammatical structure or some aspect of their lexicon).

The investigators whose research appears in *Electronic Collaborators* maximize the employment of a number of electronic solutions for collaboration. However, most overstate the learning implications of their research not by virtue of hyperbolic assertions but rather by what the researchers fail to do: The generalizability of the results reported in this volume is questionable because the investigators employ no

control groups, and they take no measures to ensure the internal or external validity of their studies, relying heavily on their abilities to interpret accurately the data that they summarize (insights are rarely supported with numeric evidence). Additionally, with the exception of Sugar and Bonk, where numeric data are provided, the researchers do not employ even the most basic of statistical tools.

The editors are careful to assert that sociocultural theory and constructivist teaching methodologies precede the electronic classroom, recognizing that some educators view electronic collaboration and Web-delivery of educational content to be an exemplary means through which to promote learner-centered instruction in today's curriculum. Such qualifications as to the efficacy of electronic collaboration are an important consideration for SLA researchers and educators, who are often skeptical of the potential for digital learning environments to promote learner-centered language instruction. Still, the editors and some of the contributors to this volume reveal a bias of sorts that electronic collaboration is the most important means by which to promote learner centered instruction in education today:

Various technological, instructional, and pedagogical developments have recently converged to dramatically alter conceptions of the teaching and learning process ... Through the use of the internet and the World Wide Web, we now have easy access to highly interactive learning environments that include a wide variety of learning media (text, sound, video, and three-dimensional imaging. (p. xxv)

These conflicting messages appear throughout the volume, which necessitates a critical read by SLA researchers.

All told, *Electronic Collaborators* is an excellent starting point for SLA investigators looking for strong theoretical guidance in designing research on electronic collaboration in L2 learning environments. This strongpoint far outweighs the lack of guidance that the volume provides in terms of interpreting the data sets that will result from such investigations and subsequent attempts to determine whether such interactions might lead to acquisition.

## ABOUT THE REVIEWER

Joseph Collentine is an Associate Professor of Spanish and the chair of the [Department of Modern Languages](#) at Northern Arizona University. He has published on the acquisition of morphosyntactically complex structures by foreign language learners of Spanish, study abroad, and CALL.

E-mail: [Joseph.Collentine@nau.edu](mailto:Joseph.Collentine@nau.edu)

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