

## REVIEW OF COMPUTER ASSISTED LANGUAGE LEARNING: CRITICAL CONCEPTS IN LINGUISTICS

### Computer Assisted Language Learning: Critical Concepts in Linguistics

Philip Hubbard (Ed.)

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### Review by [Greg Kessler, Ohio University](#)

*Computer Assisted Language Learning: Critical Concepts in Linguistics* is a four-volume collection consisting of 74 of the most influential published papers throughout the history of the field of CALL, resulting in a total of 1,820 pages. Any attempt to gather representative documentation of a field as diverse as CALL within even this number of pages is nothing less than a Herculean effort. As the editor, Philip Hubbard, points out, the expansion of CALL research has not only helped to establish and validate CALL as its own legitimate field, it has increased the credibility of CALL within broader fields such as Applied Linguistics and Education. This collection provides early examples of CALL research, illustrating how the foundational work has contributed to the rich development of the field today. Hubbard has not only selected a balanced and varied representation of articles and chapters, but has also provided an engaging and effective overview in the general introduction that frames the collection and its role within the field. Hubbard (2009) states in the introductory chapter that CALL “is both exciting and frustrating...because it is complex, dynamic and quickly changing” (p. 1).

This collection is unique both in its scope and context. Unlike an edited volume for which an editor invites submissions, the entries in this collection arrive familiar and fully intact. Further, for the most part, their influence upon the field has already been observed. According to Hubbard, the guidelines were to include what had already been proven to be important to the field. Toward this goal he put together an editorial advisory board that would help him to accomplish a greater sense of field collaboration. The advisory board consisted of editors of all the major CALL journals as well as individuals Hubbard recognized as experts able to provide specific insights in certain areas. The advisory board provided a diversity of perspectives that reflect an inclusive, broad, and international view of CALL rather than any individual’s singular vision. The feedback from the advisory board resulted in nearly 500 potential entries, which Hubbard then reduced to the final 74 articles and chapters. They are organized into four volumes and 16 parts that include:

#### I) Foundations of CALL

Part 1: CALL Theory, Frameworks, and Conceptualizations

Part 2: Early CALL Projects

Part 3: CALL Research Trends and Issues

- Part 4: CALL Design and Evaluation
- II) CALL and Language Skills
  - Part 5: Listening, Speaking, and Pronunciation
  - Part 6: Reading and Writing
  - Part 7: Grammar, Vocabulary, and Data-driven Learning
- III) Computer Mediated Communication in Language Learning
  - Part 8: CMC Foundations and Conceptualizations
  - Part 9: Synchronous CMC
  - Part 10: Asynchronous and Mixed CMC
- IV) Present Trends and Future Directions in CALL
  - Part 11: Online Learning
  - Part 12: Assessment
  - Part 13: Learner training and autonomy
  - Part 14: Teacher Education
  - Part 15: Intelligent CALL
  - Part 16: Future Directions

This collection was constructed with Hubbard's perspective that the scope of CALL includes the "use of computers to improve teacher productivity and teacher education, professional development, materials development, and language assessment. In terms of what appears in CALL publications and conference presentations, then, the wider field of CALL encompasses any use of computer technology in the domain of language learning" (p. 2). Toward this end, the first volume includes 18 selections originally published between 1988 and 2003 that provide an essential foundation of the emergence of CALL from its disparate academic areas of influence. The first part juxtaposes Higgins' (1988) reflections on the benefits of computer use across varied pedagogical practices with a number of perspectives on the frameworks, theories, and prospective paths the authors hoped the field of CALL would follow. These include the tutor-tool framework proposed by Levy (1997), Warschauer and Healey's (1998) oft-cited overview of the evolution of CALL reflecting trends in the broader world of education, and Garrett's (1998) plea for an expansion of research into varied CALL contexts. This first part concludes with two seminal pieces, including Bax's (2003) challenge for the field to strive toward CALL as a normalized element within language learning and teaching and Chappelle's (2003) overview of research investigating the role of input, interaction and production. This first part of Volume I lays the groundwork for the emerging field of CALL and inspires a variety of classroom practices and future research.

Part 2 of the first volume reminds readers of early CALL projects, such as the Athena Language Learning Project (Murray, Morgenstern, & Furstenberg, 1989). Part 3 explores trends in CALL research, including Dunkel's (1991) summary of CALL research, Chappelle's (1997) criticism of the lack of focus in CALL research, and Levy's (2000) overview of CALL research that argues, "CALL research is worthy of study as a body of work in its own right, not merely as an adjunct to research being undertaken in another, related field" (p. 190). Reflections on the critical areas of design and evaluation include the construction of a methodological framework for development, evaluation and implementation of tutorial courseware (Hubbard, 1996), and an SLA-informed evaluation framework (Chappelle, 2001). Other work includes attention to principles for designing hypermedia language learning materials (Hemard, 1997), as well as courseware evaluation practices that are pedagogically focused (Murray & Barnes, 1998) or that utilize

checklists (Susser, 2001).

Volume II includes articles and chapters concerned with language skills, including listening, speaking, pronunciation, reading, writing, grammar, and vocabulary. Listening studies in this section include a model for self-access listening and viewing based upon sociocultural theory and individual differences (Hoven, 1999), as well as findings that suggest learners benefit from control over speech rate (Zhao, 1997), varied annotation modes and choice of mode (Jones, 2003), and a better understanding of feedback in CALL (Pujola, 2001). Selections related to speaking and pronunciation focus on the benefits of using subtitles (Borras & Lafayette, 1994), suggestions for improvement in pronunciation pedagogy (Neri, Cucchiaroni, Strik, & Boves, 2002; Pennington, 1999), and the use of visual feedback in teaching discourse intonation (Chun, 1998). Research into teaching reading and vocabulary includes exploring text manipulation programs for enhancing reading proficiency (Cobb & Stevens, 1996), comparing visual and verbal annotations (Plass et al., 1998) and using annotations in incidental vocabulary learning (Chun & Plass, 1996). Pennington (2004) offers an extensive overview of the word processing research as well as the emerging literacies of the Internet. Studies involving data-driven learning include the use of concordance software for creating a variety of exercises (Johns, 1994) and training learners to use corpora themselves (Chambers, 2005).

Volume III addresses computer-mediated communication (CMC), including foundations and conceptualizations, as well as synchronous, asynchronous, and mixed CMC. This volume begins with the general overview of varied forms of CMC and related research from the book *CALL Dimensions* (Levy & Stockwell, 2006). The foundations and conceptualizations of CMC also include Salaberry's (1996) early observations of the nature and potential of CMC in pedagogical contexts, Smith's (2003) CMC-focused expansion of the Varonis and Gass (1985) model for negotiation of meaning, and Warschauer's (1997) framework for online collaborative exchanges. Part 9 focuses upon synchronous text-based CMC. Early studies suggest that in-class, text-based CMC discussions between students fosters interactive competence (Chun, 1994), promotes equal participation and greater lexical and syntactic complexity (Warschauer, 1995/6), and results in increased participation, morphosyntactic complexity, and a wide range of discourse functions (Kern, 1995). Later studies suggest that the negotiation of meaning is promoted by synchronous CMC-based jigsaw tasks (Blake, 2000) and information gap tasks (Pellettieri, 2000). Other studies in this volume suggest that text-based CMC can be used to construct a "dynamic, learner-centered discourse community" (Darhower, 2002, p. 273), and that chatting can help improve oral proficiency (Abrams, 2003; Payne & Whitney, 2002). Studies into asynchronous and mixed CMC have found that telecollaboration may not succeed between students with differing language levels and value of language (Belz, 2001), that email exchanges can promote syntax and vocabulary (Stockwell & Harrison, 2003), and that communication tasks benefit from the use of appropriate tools (Thorne, 2003).

The final volume focuses on current trends (online learning, assessment, learner training and autonomy, teacher education, intelligent CALL) and future directions. Studies investigating online learning include suggestions for teacher use and creation of materials (Felix, 1999), suggestions for creating optimal psycholinguistic learning environments (Doughty & Long, 2003), and suggestions for helping "students enter into a new realm of collaborative inquiry and construction of knowledge" (Kern, Ware, & Warschauer, 2004, p. 254). Other work involving online learning examines audio conferencing in distance language courses (Hampel & Hauck, 2004) and the proposal of a learner-context theory of distance language learning (White, 2005). The area of assessment is summarized and its potential projected first by Brown (1997), who provides a practical series of questions and answers, and later by Chapelle and Douglas (2006), who highlight the advantages that computer-assisted language testing has over traditional methods. Learner training and autonomy are also briefly examined by Hubbard (2004), who proposes a cyclic method of training, and by Blin (2004), who proposes the use of cultural-historical activity theory to describe student autonomy in CALL. Part 14 concerns teacher education including studies into the use of CALL following training (Egbert, Paulus, & Nakamichi, 2002) and teachers'

communication in an online training course (Arnold & Ducate, 2006). This section concludes with the introductory chapter to the book *Teacher Education in CALL* that summarizes the area and proposes a role-based framework for CALL education (Hubbard & Levy, 2006). The area of intelligent CALL includes investigation into intelligent feedback in Japanese vocabulary and structure (Nagata, 1993), natural language processing and student modeling (Hamburger, Schoelles, & Reeder, 1999), and learner control and reliance on peeking at correct answers (Heift, 2002). This section concludes with a review of the area of intelligent CALL (Heift & Schulze, 2007). The final part of the volume is about future directions in CALL. These include virtual worlds for language learning (Svenson, 2003), the use of cell phones in mobile language learning in Japan (Thornton & Houser, 2004), and suggestions for using a variety of Web 2.0 tools for language learning (Thorne & Payne, 2005). The final volume concludes with a glance toward the future, focusing on technological advancements and the anticipated benefits they will offer regarding mobility and social connections (Price, 2007).

Each of the articles and chapters in this collection offer a variety of rich insights, making it impossible to adequately summarize them in a brief review. Hopefully, the salient points aforementioned will inspire readers. Often researchers involved in CALL, as with any discipline involving technology, are preoccupied with looking forward rather than reflecting on past conceptualizations. Further, given the diversity of the field, our individual knowledge of previous work is likely limited to our own areas of expertise. This collection should serve as a reminder of the important work that CALL scholars have contributed to bring the field to its current state as a unique discipline with numerous dedicated journals, books, edited volumes, conferences, and communities. This collection goes far in documenting the construction of the field, as well as the theories, observations, and discussions that have informed its evolution. For readers who have been scholars of CALL for more than a decade, many of the entries in this collection are likely to be familiar, while those who are relatively new to the field may find that many of these articles fill in gaps in their understanding of the emergence and evolution of the field. The articles in this collection are invaluable from both of these perspectives. As a testament to their sustained impact on the field, most continue to be cited frequently in current research.

The collection is easy to navigate in a variety of ways. It includes not only a table of contents that is organized by volume, parts, and articles, but also a separate chronological table of the original publications dates of the articles and chapters. This table serves as a timeline with complete bibliographic information and details about the location of each article or chapter within the collection. This cross-listing allows the reader to readily locate the article or chapter within its time period, within the collection itself, or in its original published form.

At \$1,425.00 this four-volume set is clearly priced for institutional purchases. This reviewer strongly recommends that those able to purchase a set for a library do so. Yet, as this is a collection of previously published work, there are other means by which readers without access to university libraries can gather these important articles. Hubbard has provided a very useful online guide to the collection at <http://www.stanford.edu/~efs/callcc/> that includes a table of contents with direct links to each of the articles that are freely available online, including those published in *Language Learning & Technology*, *CALICO Journal*, *ReCALL*, or archived on individual scholars' Web sites. Twenty-seven of the 74 articles are directly available in this manner. The others are either chapters in books or journal articles that can be accessed through a university periodical or document retrieval system. The table of contents includes full bibliographic information as guidance. The editor's support site also includes a full copy of the 20-page general introduction chapter, which is a succinct and engaging overview of the field on its own. While it is a very thorough site, missing is a list of the nearly 500 articles considered for the collection, which would be a useful addition and an invaluable resource for CALL scholars.

This collection is one of many within the Routledge *Critical Concepts* series. Other editions that may be of interest to readers include *Second Language Acquisition*, *Language Acquisition*, *Cognitive Linguistics*, *Pragmatics*, *Bilingualism and Multilingualism*, and *Sociolinguistics*. The formatting for this series is

consistent across collections, with each series including a general introduction to the collection. In this collection, Hubbard's general introduction does an excellent job of providing context for the field and guidance toward how one might approach the reading of the articles. Each of the volumes also begins with a clear and concise overview of the contribution of the content. While these overviews are all useful for providing overviews, one piece that would be helpful across the series would be transition texts between sections within a volume or between articles.

Also useful would be a second collection on CALL, as this would allow for the inclusion of more articles. Other collections in this series, such as *Pragmatics*, have released two complete sets in order to capture the breadth of their fields. Certainly CALL is varied and diverse enough to warrant this expansion. This is particularly important considering that, as Hubbard notes, "We have many promising and innovative ideas but only the beginnings of definitive answers as to how to use computers most effectively to support language learning" (p. 1). According to Hubbard, a second collection would allow inclusion of more recent research that had not yet been empirically explored at the time of these selections, including investigation into mobile learning, varied forms of Web 2.0 implementation, and virtual worlds. Of course, the current ubiquity of technology in modern life will likely introduce unforeseen innovation that will be adapted and integrated into CALL contexts. As we engage in, observe, and evaluate these advancements we can benefit greatly from the pioneering scholarship represented in this collection.

Anyone who is serious about scholarship in CALL should consider the articles in these volumes as required reading. This collection includes many highlights of the essential evolution of CALL as it has been defined over the past few decades. It forms a solid foundation upon which the future of this diverse and exciting, yet sometimes frustrating field will be built. As Hubbard writes in the general introduction,

As the field of CALL keeps evolving and more of what astounds us today becomes commonplace, it is hoped that the articles in *Computer Assisted Language Learning: Critical Concepts in Linguistics* will continue to capture valuable insights about where we have come from to help provide a foundation for understanding where to go next. (p. 14)

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## ABOUT THE REVIEWER

Greg Kessler is Assistant Professor of CALL and director of the Language Resource Center at Ohio University. His research interests include CALL teacher preparation, CALL use in innovative pedagogical contexts, and student and teacher autonomy in CALL contexts. He was also a member of the advisory board for *Computer Assisted Language Learning: Critical Concepts in Linguistics Collection*. For more information, visit his homepage at <http://www.ohio.edu/linguistics/people/Kessler.html>

E-mail: [kessler@ohio.edu](mailto:kessler@ohio.edu)

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