

Review of *The handbook of technology and second language teaching and learning*

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The handbook of technology and second language teaching and learning

Chapelle, C. A., & Sauro, S. (Eds.)

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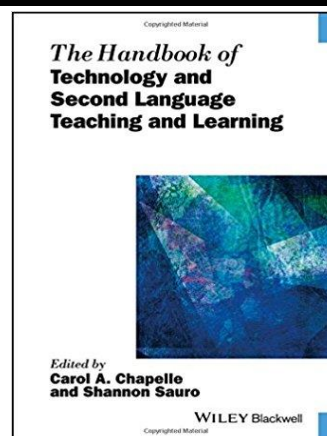
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As an ever-growing body of research on second language acquisition (SLA) has indicated, numerous factors are involved in second language (L2) teaching and learning (Gass & Mackey, 2012; Gass & Selinker, 2008; Ortega, 2009). Among these factors, technologies of all sorts are playing an increasingly significant role in SLA, making the comprehensive analysis of the interplay between them duly necessary. In its four sections and 30 chapters by leading international scholars (e.g., Chun, Liaw, Godwin-Jones, Heift, Hegelheimer), *The handbook of technology and second language teaching and learning* collects the most recent strands of research on this topic, offering an in-depth and authoritative reference book for scholars, teachers, students, and practitioners. Chapelle and Sauro, the editors, together with other contributors, are to be congratulated on the timeliness, inclusiveness, richness, and reader-friendliness of the handbook. It is impossible to do justice to all aspects of this vast volume as a whole and the range and diversity of every essay in a short book review and my observations are as a result inevitably selective.

In the heading piece, the two editors first state their goal in creating this volume: to communicate “the shape and texture of the technology-rich environments that language learners inhabit today as well as the relevance of these environments for second language teaching and learning” (p. 1). They firmly believe that technology has affected the potential for access to an increasing number of language interests (p. 2). An introduction to the layout and organization of this volume then follows, accompanied by brief comments on the particular contribution of each chapter. This succinct yet enlightening introductory essay provides useful background for and explanation of essential topics covered in the subsequent chapters.

The first section centers on the ways that technology is integrated in the teaching and learning of specific aspects of language knowledge and skills (i.e., grammar, vocabulary, reading, writing, listening, speaking, pragmatic abilities, and intercultural competence). Chapter 2, by Otto, reviews the chronological advancement of the use of technology for L2 learning from the early 20th century through the 21st century, setting the stage for many technologies discussed in the rest of the handbook. Chapter 3 provides an overview of technologies for L2 grammar by analyzing in detail four typical technology-based pedagogies: tutorial computer-assisted language learning (CALL), intelligent CALL, data-driven learning, and computer mediated communication. Responding to the advent of large numbers of vocabulary apps for mobile devices, Chapter 4 examines the importance of self-regulated learning—an under-researched

topic—to L2 vocabulary learners in today’s mobile-assisted language learning environment. Of particular interest to researchers of L2 reading development, Chapter 5 introduces currently popular reading technologies, investigates the major challenges for educators, and offers future research directions. Chapter 6 reviews how new technologies, namely Web 2.0 applications, automated writing evaluation systems, and corpus-based tools, have shaped the teaching and learning of L2 writing. The next two chapters discuss CALL for L2 listening and speaking, respectively. The last chapter of the section explores models of intercultural communicative competence and the expansion of pragmatic repertoires in digitally-mediated interactions.

Section 2 highlights a series of new pedagogies (including new concepts and practices) that have developed in recent years. A common concern is that shifts and developments in technologies have dramatically changed the environments, modes, and scale of L2 teaching and learning, requiring both teachers and learners to rethink their practices. Chapter 10 investigates the impact of recent developments in technology-mediated distance language teaching on pedagogical issues such as task design, assessment of learning, and teacher expertise. Chapter 11 shifts to blended and hybrid learning, an issue drawing lots of academic attention in recent years. Through a research review of 26 studies conducted from 2006 to 2014, Grgurović reveals the major trends in the field and convincingly suggests that it will be a preferred approach in the future. Telecollaboration, a significant element in both distance and blended L2 learning, is neatly defined and analyzed in detail by Dooly in Chapter 12. I am most stimulated by the next two chapters, dealing with virtual worlds and gaming for language learning. In Chapter 13, Sadler focuses on the application of games and software such as Second Life, OpenSim, Active Worlds, and Club Penguin in L2 education. In Chapter 14, Reinhardt reviews the history and theory of games in CALL and rightly points to the need for collaboration among the stakeholders, researchers, L2 educators, and game developers. With more collaboration, it is hoped that research on games in L2 learning contexts will yield more promising and enlightening results. Again, mobile learning is the theme of Chapter 15, in which a contemporary pedagogic skillset designed for teachers and educators is suggested. Chapter 16 investigates how task-based language teaching can be implemented through Web 2.0 technologies and proposes important areas to be explored. In Chapter 17, Cotos maps out corpus-based pedagogies in teaching language for specific purposes by analyzing the application of corpora in data-driven learning approaches where students engage in hands-on explorations of texts. Chapter 18 probes into the intersection of technologies and new literacies, such as multimedia literacy and computer-mediated communication literacy. Finally, Chapter 19 shifts to the emergence, recent research, and future challenges of CALL teacher education, a well-established domain.

Section 3, comparatively short, briefly sums up the work being done with technologies in language testing and assessment. The review of classroom assessments by Jamieson and Musumeci in Chapter 20 illustrates how assessment principles can be utilized in the evaluation of language learning materials. The next chapter, with a focus on technology-mediated high-stakes testing, discusses examples of how technology can be used in the development, administration, scoring, and security of language tests and puts forward key issues for future research. Chapter 22 moves to validation in language testing, a term arbitrating educational and linguistic policies, institutional decisions, pedagogical practices, and tenets of language theory and research (Cumming & Berwick, 1996, p. 1). The author outlines a framework for an argument-based approach to validation that offers a way for integrating technology considerations in language testing.

The final section, encompassing eight chapters, mainly addresses the practices that are instrumental in creating innovations with technologies of various kinds in language learning. Chapter 23 investigates the application of courseware in CALL, rightfully arguing that the majority of language teachers are likely to rely on commercial courseware in the future (p. 361). The next chapter conducts an overview of the origin and evolution of a design-based research paradigm based on seminal contributions in the literature. In Chapter 25, Chappelle examines five types of arguments (i.e., comparative argument, authenticity argument, corpus linguistic argument, theory-based argument, and pedagogy-based argument) that have been used in the evaluation of technology for language learning. She concludes the chapter by suggesting that “the perspective of evaluation as argument holds the potential for improving the profession’s capacity for designing and critiquing evaluations of technology for language learning” (p. 378). In Chapter 26, Chun

reviews research methodologies used in both traditional aspects and technological environments of language and culture learning. In Chapter 27, the authors introduce the key components for conducting a meta-analysis, followed by an examination of how existing CALL meta-analytical reports are documented in L2 context. Chapter 28 focuses on a multimodal, corpus-based approach to research on online language learning, an approach that is not widely applied. Chapter 29 discusses technology-enhanced SLA research in terms of three theoretical frameworks: cognitive approaches, the interaction approach, and sociocultural theory. The final chapter functions as an excellent summary of the handbook. The two editors review three fundamental themes of the book (i.e., multimodal nature of language abilities, innovative nature of language teaching and learning, and the integral role of research in understanding language teaching and learning) while commenting on the particular contribution each chapter makes and looking to the future of technology and L2 teaching and learning.

The greatest strength of the handbook lies in the strong integration and cross-fertilization between theories and practice. SLA-centered theoretical frameworks, together with technology-assisted teaching modes, are often tested in the classroom, and understanding of classroom language and behavior can feed into the betterment of technologies and the advancement of theoretical notions. The synergy between technologies of various kinds and SLA in different cultures and nations is fully demonstrated and examined. The overall structure is, while perhaps standard, very effective. Most chapters open with a section that describes an approach or theory and its history followed by the outlining of core issues and the summary of seminal research and, in some cases, case studies and future research suggestions. This organization is, on the one hand, ideal for linking research and practice, past and future and, on the other hand, conducive to readers' digestion. One of the most common problems of reference works like this one is that they require the readers to have a considerable knowledge of the issues discussed. However, such is not the case for this handbook, as most of the authors have made an enormous effort to present their arguments in a way that is easy to understand for non-specialized readers. The editors' effort in bringing together such a broad range of researchers, teachers, and practitioners is admirable. This handbook is also characterized by highly readable font, generous spacing, and many types of illustrations, rendering the reading experience enjoyable.

However, as with all such collections of works, the handbook has some weaknesses. One potential shortcoming is the lack of research on language processing based on technology-assisted psycholinguistic and neurolinguistic methodologies. Issues such as cognitive ability, working memory capacity, and interactional feedback in SLA are largely ignored. Another point is that the handbook would have been stronger if a list of illustrations, a list of abbreviations, and a glossary—usually integral parts of reference works—were provided. In addition, Chapter 10 and Chapter 17 are somewhat thin on research support, leaving the readers unconvinced of the efficacy of the approaches and paradigms discussed.

In sum, it can be said that most of the discussions in this handbook are empirically supported, theoretically grounded, and thought-provoking, making them conducive to further understanding and more in-depth research on the increasingly frequent and sophisticated interplay between technology and SLA. Featuring accessible writing styles, authentic references, comprehensive overviews, enlightening pedagogical commentary, elaborate theoretical elucidation, and critical evaluation, *The handbook of technology and second language teaching and learning* is a truly valuable reference work not only for SLA researchers and language teachers, but also for undergraduates and postgraduates involved in SLA research.

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