



BOOK REVIEW

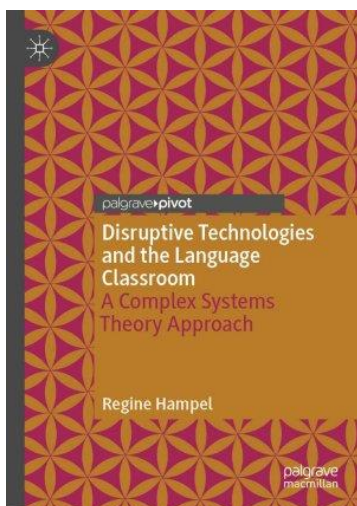
Disruptive Technologies and the Language Classroom: A Complex Systems Theory Approach

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How to cite this book review:

Cengiz, B.C. (2021). Review of *Disruptive Technologies and the Language Classroom: A Complex Systems Theory Approach*. *The EuroCALL Review*, 29(1), 93-96.
<https://doi.org/10.4995/eurocall.2021.14141>



*Disruptive Technologies
and the Language Classroom
A Complex Systems Theory Approach*

By Regine Hampel

Published in 2019 by Palgrave Pivot

156 pages

ISBN 978-3-030-31368-5

DOI 10.1007/978-3-030-31368-5

<https://www.palgrave.com/gp/book/9783030313678>

Which dynamics of language learning and teaching change when traditional face-to-face language classrooms are moved to the online medium? And more importantly, does the advent of online technologies change the ways language teachers teach and language learners learn? In "Disruptive Technologies and the Language Classroom", Hampel (2019)

provides new insights into these important questions. She points out that online language learning and teaching destabilizes the language classroom by affecting its overall dynamics and by opening up new venues for language learning and teaching. By referring to her years-long experience in online language teaching and research, she argues that understanding the effects of these online technologies will better help language learners to communicate successfully in the second language (L2). Viewing communication as an aim and instrument in language learning, she focuses on the idiosyncrasies of computer-mediated communication and presents a theoretical discussion of computer-mediated communication's unique features and affordances in reference to related literature.

The book includes seven chapters. Chapter 1 starts with Hampel's argument that "technologies are not neutral tools" (Hampel, 2019, p.1) but hold certain transformative characteristics that impact language learning and teaching. In this chapter, Hampel introduces the theoretical approach of the book. Seeing the "language classroom as a complex system" with various integrated components (Cameron & Larsen-Freeman, 2007, p.236), Hampel argues that this systems perspective will better help address the issues related to language learning and examine the effect of new technologies on communication and interactive meaning-making both inside and outside the language classroom. Combining this perspective with sociocultural theory and the theory of multimodality, Hampel identifies the significance of the book as its strong theoretical basis with a focus on communicative and interactive aspects of language learning. This chapter ends with an overview of the remaining chapters.

Chapter 2 gives a detailed account of each of the 3 theories underlying the book's theoretical framework: complex systems theory, sociocultural theory and theory of multimodal communication. Hampel points out that much of the Computer-Assisted Language Learning (CALL) research adopts theoretical approaches that are suited to face-to-face pedagogy, and that complex systems theory is largely ignored in CALL research. She argues that language is itself a dynamic system and language learning is a dynamic process with a set of interacting variables. Therefore, this theory is well-suited for delving into the ecosystem of language classrooms which consists of language learners, teachers, learning context, and tools and modes of communication. For Hampel, socio-cultural theory, which emphasizes the social nature of learning, is useful as it helps to uncover the impact of "social context of learning" on L2 "interaction and collaboration" (Hampel, 2019, p. 30) as well as the influence of such tools as language and technology on L2 learning and development. Finally, the theory of multimodal communication allows for the investigation of how multimodal resources that are inherent in the language classroom are used for interactive meaning-making by language learners and teachers.

Chapter 3 deals with a discussion of the historical development of communication from earlier communication tools and modes to the technologies of this era. Hampel points out that digital technology is advantageous in that it enables multimodal communication by providing easy access to different types of communication through the use of Computer-Mediated Communication (CMC). She also suggests that digital technology broadens the concept of brick-and-mortar education to one that allows for a combination of face-to-face learning and teaching, online written and spoken interaction and real-world learning. As one shortcoming of the chapter, the author gives too much extra information about the early history of communication tools and modes which is not directly related to language learning and teaching.

Chapter 4 outlines the research studies on CMC in language learning environments using complex systems theory as the main theoretical framework. Utilizing the complex system of face-to-face conversation as the basis for comparison, this body of research demonstrates changes in three key areas of language classes that are brought about by digital technology. These are changes in "classroom interactions patterns", in communication and in "the positioning of the language learner in relation to the world" (Hampel, 2019, p.12). The studies on classroom interaction show that the IRF model, which is a commonly used turn-taking pattern in face-to-face language classes and symbolized by teacher initiation (I), student response (R), and teacher feedback (F), is replaced by new interaction patterns offered by digital tools. Similarly, negotiation of meaning routines take new forms in online language learning contexts. The studies

related to online communication reveal that synchronous and asynchronous tools have different affordances and challenges for language learners and teachers. A common theme in these studies is that it is optimal not to view synchronous and asynchronous tools as alternatives but to benefit from their affordances depending on how best they address the target language skills and on learner choices. Hampel points out that multimodal environments such as “social media”, “virtual worlds” and “online games” (Hampel, p.71) open the walls of the physical classroom to the real-world by giving the learners many opportunities for informal learning. This chapter is quite useful for researchers since it provides the reader with many insights about possible research topics in the area.

In Chapter 5, Hampel reports her answers to Larsen-Freeman and Cameron’s (2008) ‘what if’ questions by adapting them to the context of the book. There are nine questions. One example question is as follows: “What if dichotomies that have been axiomatic in certain linguistic theories obscure insights into the nature of language and its learning rather than facilitate them?” Overall, Hampel’s responses to these questions emphasizes the fact that all of the changes mentioned so far require a new approach to language learning and teaching. This approach should reinforce the creativity and dialogic nature of language learning and include learner participation and perspective in the learning process. One problem with this chapter is that it may be hard for readers to understand due to the complexity of the questions and answers alongside the highly academic language used in the chapter.

Chapter 6 is concerned with the implications of new technologies for teachers, institutions, educational policy, research and researchers. Hampel draws attention to the fact that teachers should not fall into the common pitfall of continuing their earlier teaching practices with the new digital technologies. They should make the necessary changes in many aspects of teaching including the selection of learning activities and tasks as well as assessment. In addition, these efforts should be supported by institutions to motivate teachers to conduct their own research on digital technologies. According to Hampel, teachers should also be supplied with professional development programs for an effective use of digital technologies. The last section of the chapter addresses possible research areas that need attention from CALL researchers. Here Hampel emphasizes the need for more qualitative studies and lists possible challenges in CALL research. Finally, the last chapter presents a summary of the whole book and reiterates the main arguments of the author regarding the transformative effects of digital technologies on language learning and teaching.

This book is an important resource since it lays out clearly the ways in which new technologies have changed the landscape of foreign language education. It is also beneficial due to the fact that it provides a snapshot of the unique characteristics of “online communication” and “meaning-making” (Hampel, 2019, p. 2) in digital contexts of language learning and teaching by using research findings. One drawback of the book is that its focus is on theory rather than on practice and the book requires a background in L2 research and theory on the part of its readers. Additionally, the application of the theories discussed in the book to classroom environments is not discussed adequately and gives teachers few ideas about how to utilize these technologies in a successful way. Overall, however, with the new perspectives it offers about the transformations that new technologies bring about in language learning and teaching contexts and the presentation of various language learning opportunities in digital platforms, this book is valuable for language teachers and researchers.

References

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Larsen-Freeman, D., & Cameron, L. (2008). *Complex systems and applied linguistics*. Oxford: Oxford University Press.