Researching Online Foreign Language Interaction and Exchange: Theories, Methods and Challenges.
 Melinda Dooly and Robert O'Dowd (Eds.). Oxford: Peter Lang. 2012. Pp. v + 347.

Telecollaboration refers to the use of online communication tools to connect language learners in different countries in collaborative projects and intercultural exchange (Belz, 2001). The last twenty years mark an intensive period of research in online interactions and intercultural exchange. The growth of telecollaboration and online foreign language (FL) interaction in educational settings is irrefutable. This is clearly evident in the volume and concentration of research on it and its related topics, with research developing in parallel to and closely reflecting the unfolding of online interaction and exchange in the field of foreign language education (Reinhardt & Thorne, 2011). Conscious of the wide variety of approaches, paradigms, and challenges that researchers are confronted with when approaching the field of online interaction and exchange in FL education, this book presents a comprehensive guide for practitioners and newcomers alike by two of the veterans in the field, M. Dooly and R. O'Dowd. The editors propose that the volume primarily lends itself to the question of how to investigate telecollaborative 2.0 activity; it also caters for the wider range of online FL exchange including in-class interaction, class-to-class interaction, and learner interaction with the outside world.

Third in a series on *Telecollaboration in Education* dedicated to online interaction and exchange, the book *Researching online foreign language interaction and exchange: theories, methods and challenges* has a two-fold aim: 1) to introduce an array of methods and current and emerging theories in FL education used to investigate online FL interaction and exchanges, and 2) to offer a synopsis of key research issues in the context of Web 2.0 learning environments. More specifically, the text discusses the fundamental challenges that researchers face because of the virtual, intercultural, and multimodal nature of online environments. Although principally written for current researchers and practitioners in the field, the volume offers important and useful insights to newcomers from other areas of FL education to this specific field of technology-assisted language learning.

The book is organized into three sections. The first section presents theoretical approaches to research in online exchange; the three chapters in this section address the origins and evolution in the theoretical approaches that have been or could be adopted in order to understand and investigate online interactions. In this section, the interactionist, socio-cognitive, and mixed-methods approaches are considered. One of the chapters also discusses the Cultural Historical Activity Theory in researching computer mediated communication (CMC) in FL education. The second section, which is comprised of four chapters, centers around key areas of research and looks at how a better understanding of the processes involved in online FL contexts can be achieved through various existing and emerging data collection and analysis approaches, methods, and tools. The last section in the book specifies issues and challenges researchers confront in online FL exchange. The two chapters in this section offer potential solutions through concrete and

practical suggestions, applying specific methods of data collection and analysis, namely corpus analysis and eye-tracker technology. Each of the three sections in the book is comprised of more than one chapter authored or co-authored by renowned researchers and practitioners in the field.

In the first chapter, Reinhardt discusses two methodological frameworks that have been adopted by researchers investigating CMC in FL settings, namely the interactionist and socio-cognitive approaches. By presenting the key research findings from the two approaches, Reinhardt highlights that interaction and negotiation of meaning hold pivotal value in the two frameworks. In his discussion of the two approaches, he aligns the interactionist paradigm with quantitative and experimental methods, and the socio-cognitive paradigm with more naturalistic and qualitative methods of data collection. Acknowledging the debate between the proponents of two approaches, the author offers a middle ground by "exploring the regions where theories and methods [of the two approaches] overlap" (p. 61). In doing so, he offers a new perspective on interaction and negotiation, as well as the cognitive-social debates, by advocating for ecological approaches. Such an approach, according to Reinhardt, seeks to include particular variables that are otherwise isolated or avoided in the other two paradigms. Ecological approaches offer a promising solution by proposing a view of language, language learning, and language learners as interweaving components of a dynamic ecology and thus "transcend the cognitive-social debate" (p. 67). Reinhardt contends that by invoking both qualitative and quantitative research methods, the ecological approaches offer an inclusive and elaborated understanding of the dynamics and variables involved in the learning process.

In the second chapter, Blin introduces Cultural Historical Activity Theory (CHAT) for researching online FL education. Termed as "Vygotsky's neglected legacy" (Roth & Lee, 2007, p. 186), CHAT seeks to develop a better "understand[ing of] individual human beings [and] the social entities they compose, in their natural everyday life circumstances" (Kaptelin & Nardi, 2006, p. 31). In this approach, activity systems form the primary units for study by allowing researchers to investigate a *community* comprised of individuals or groups sharing a motive by bringing in their own histories and experiences coupled with the *rules* and *division of labor* that govern and mediate individual or group actions in that community. Blin advocates for CHAT and argues that dual activity systems manifested in telecollaboration can potentially provide rich ethnographic data benefitting research and praxis. Researchers exploring the interrelatedness of collective languaging and online FL development are invited to consider CHAT as it can potentially offer new possibilities for the design and analysis of complex learning environments, "where the boundaries between physical and virtual worlds, and between formal and informal learning are increasingly blurred" (p. 100).

In the third chapter, Ware and Rivas argue for the potential of mixed-methods approaches by highlighting their uses and challenges in online FL interaction and exchange. The chapter underscores the problems associated with the traditional research design dichotomy and attempts to showcase the potential of mixed-methods approaches to overcome the limitations in the two traditions of inquiry through an alliance of and

respect to "the unique contribution of each research methodology" (p. 127). The chapter provides an overview of the component features of mixed-methods designs, followed by an extensive discussion on the benefits of using a variety of quantitative and qualitative types of data for triangulation purposes. The authors demonstrate the uses of such an approach through an example of an online language exchange project in U.S. and Spanish secondary classrooms. The application of the mixed-methods approach on an asynchronous project showcases the integration of qualitative and quantitative methods in examining online language development and exchange.

The second section of the book starts with a chapter by Dooly and Hauck, who discuss the growing and evident need for investigation in Multimodal Communicative Competence (MCC) in online FL education. First the authors trace the need for fostering the development of MCC in online interaction and exchange, followed by an in-depth exploration of the issues and challenges that scholars encounter in researching this particular area. Through helpful screenshots, the chapter unfolds these issues and challenges by discussing the need to choose an appropriate approach for empirical research starting with transcription and representation of written, audio, and visual data, to the evaluation of data analysis and findings. Ethical issues in researching MCC are outlined to highlight the complexity of multimodal data collection and analysis. More specifically, the presence and role of the researcher in the whole research process is discussed in considerable length. Lastly, transparency in the research process is considered to be of vital importance in such multifarious and challenging research in MCC, which the authors propose to be innovative and promising.

In the following chapter, Müller-Hartmann elaborates on the benefits and effectiveness of classroom-based Action Research (AR) paradigm in telecollaboration. Both AR and activity theory (AT) are explored as approaches in the broad ecological context of online FL interactions. The author advocates for a "pedagogic approach to research… which includes all participants, the teacher-researcher as well as the learners" (p. 163). The author's stance stems from the observation that telecollaboration research is mostly done by those who are also practitioners. As such, they are responsible for the learning environment (its conceptualization, design, and implementation), and in addition to their research interest and pursuance of diverse empirical questions, look at the development of their own practice. AR is understood as research steered by the practitioners themselves inside and outside the classroom seeking to discern pedagogical implications for improved practice. In this sense, the qualitative nature of case studies, which makes AR a particularly suitable approach for teacher-led investigation in online exchange, is investigated. In particular, the author discusses those particular aspects of AR that enable practitioner-researchers to better understand classroom and group interaction processes from the learners' perspective. The focus of the discussion, thus, is the teacher's role in telecollaborative FL environments. Moreover, three specific forms of competence are first defined and then explored using a sample case study with pre-service teachers from Germany and the U.S. In doing so, the author showcases the use of AT in exploratory practice within the AR approach, and explores its potential as a useful theoretical approach to analyze rich online FL data sets for practitioner-researchers.

Panichi and Deutschmann, in the next chapter, investigate research issues and methods in one of the more recent developments in online FL education, namely the 'virtual worlds'. Since this mode of teaching is "paradoxically closer to traditional face-to-face teaching than many forms of online education" (p. 205), the authors argue that the virtual worlds represent a different and more nuanced form of online education and research. Given this observation, the authors advocate for special attention paid to researching virtual worlds. According to the authors, virtual worlds can be closed or open environments replete with telecollaborative activities that are potentially useful and effective in online FL development. The chapter offers a synopsis of the main features of virtual worlds before exploring the potential of this approach for online interaction and exchange. The authors discuss various issues and challenges related to the approach and offer useful insights into how to address them. These issues include but are not limited to the types and retrieval of data, choice of data collection tools, data collection process, and participants' technical abilities and comfort in virtual worlds. It is argued that these issues are vital in that they can have an effect on the research by impacting the researcher's attitude and response towards the online environment. For instance, design and implementation, and continued monitoring of virtual tasks are deemed challenging given their synchronous nature in addition to avatar identity, privacy, consent, copyright, and other ethical issues.

In the last chapter of the second section, Möllering and Levy present an analysis of research methods regarding intercultural competence (ICC) in CMC by bringing the central methods for data collection and analysis to the fore. In the first half of the chapter, the authors exemplify the diversity of approaches that researchers have adopted in researching online FL ICC by critically analyzing some key online research studies in the area. They argue that the existence of such diversity is testament to the complex nature of 'culture' itself. In this light, the authors, drawing substantially on Levy (2007), discuss the concept of culture from five perspectives that are "complementary and inevitably overlap" (p. 245). The five perspectives are, (1) *culture as elemental*, (2) *culture as relative*, (3) *culture as group membership,* (4) *culture as contested*, and (5) *culture as individual*. The authors claim that these perspectives help provide insight into what might be required in terms of research design in order to capture the complexity of culture in current online FL exchange and interaction environments.

The third section is devoted to identifying emerging issues, challenges, and potential solutions in more recent methodological developments in online language learning environments. In the first chapter of this section, Vyatkina introduces the concept of learner corpora and Contrastive Interlanguage Analysis (CIA) in researching FL settings. The author discusses real examples in order to exemplify the use of these concepts in investigating language development. She presents a corpus of data produced by learners of German as a second language in a college-level online exchange with native speakers of the target language. In her discussion on corpus analysis methods and tools, the author pays special attention to the strengths of corpus research in combining quantitative and qualitative approaches, thereby advocating for CIA and corpus analysis in order to develop a more nuanced understanding of online FL development.

In line with the theme of the third section, O'Rourke, in the last chapter of the volume, examines eye-tracking technology and its potential in research on text-based synchronous CMC. Eye-tracking technology is understood as the "recording of a subject's point of gaze during visual tasks" (p. 305). The author presents an account of eye-tracking devices and procedures involved in conducting research that involves such devices. He also offers examples from research data that include collections of output logs and eye-tracker data involving learners of French, German, and Spanish. Through an analysis of these data, the author manifests the usefulness and justification of eye-tracking technology in order to capture a first-person perspective of a phenomenon under investigation. The chapter also discusses some issues and challenges, and provides insights to some potential solutions for future researchers in this area.

With *Researching Online Foreign Language Interaction and Exchange: Theories,Methods and Challenges* a volume in the *Telecollaboration in Education s*eries, Dooly and O'Dowd have presented online FL teachers, researchers, and users with an invaluable guidebook to navigate the sometimes overwhelming thicket of telecollaboration in FL education. In general, as indicated by the title of this volume, the book presents extensive insight into the theories, methods, issues, and challenges involved in researching FL online interaction and exchange. Following a similar pattern, each chapter sets out with an introduction to the theory or concept under discussion. This is followed by drawing its linkage to FL telecollaboration by discussing relevant research studies in that area and concluding with useful examples of possible solutions and future research directions. Each chapter also includes an extensive bibliography for further study. Although provision of a glossary and index of the terms and concepts used in the book would have provided the readers an easy reference guide, this well-edited collection achieves its stated goals. The explanations of concepts related to telecollaboration are clear, concise, and understandable, and the examples are edifying. While the volume as a whole serves its intended audience well by providing a simple guide to early, existing, and emerging research in online FL education, this is a text that is appropriate for a wide audience. It not only provides a succinct overview for the more experienced FL researcher seeking to delve more deeply into the realm of telecollaboration, but it also offers useful insights to the serious newcomers to the field who may eventually choose a specialization in researching online interaction and exchange. In addition, the volume presents accessible introduction to the teacher practitioners who simply want working knowledge of online FL environments to create and implement varied and exciting online projects with confidence for their students' foreign language development.

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