Technology and the Psychology of Second Language Learners and Users

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<tr><td colspan="3">Technology and the Psychology of Second Language Learners and Users</td></tr>
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In this volume, *Technology and the Psychology of Second Language Learners and Users*, the editors and authors examine how language learners are affected by technology during language learning. Most of the chapters focus on English, and they feature a variety of qualitative and quantitative studies on learners and their perceptions of technology-enhanced learning. Research methods used include surveys of language learners' beliefs, habits, and behavior, as well as practical interventions aimed at improving language learning using a variety of technologies. The book has a wide scope and there is information on the application of technology to language teaching and learning, which is of interest to both practitioners and researchers.

The book is organized into seven main parts. In Part I, Freiermuth presents a brief history of language learner psychology and the different research paradigms within it. He then proceeds to explain why psychology is important when considering technology in language teaching and learning, providing overviews of identity and the concept of self, emotion, motivation, and willingness to communicate (among other topics). Following this, a brief history of technology in language learning is provided to ensure understanding of the subsequent chapters.

Part II comprises three chapters that examine language processing. The highlight of this section is Chapter 2, written by Karina Collentine, which documents the use of an input-based virtual

environment, somewhat similar to a computer game, for the acquisition of Spanish requests. Collentine found small positive effects in acquisition resulting from consciousness raising through responses from a character in a virtual environment. She also found small positive effects for structured input as given by a teacher with handout materials prior to use of the virtual environment. Other chapters in this section focus on Arabic vocabulary learning across graphical and verbal modalities, as well as the use of closed captions and subtitles for higher-level learners of German.

Part III looks at emotional and behavioral constructs related to technology use in English-language learning, and it is composed of four chapters. The final pair of chapters, Chapter 7, by Quyen Thi Thanh Tran and Loi Van Nguyen, and Chapter 8, by Hsin-chou Huang, look at flipped classrooms. Tran and Van Nguyen discuss how learners' engagement increased with the use of videos and quizzes in Facebook for flipped classroom instruction, and Huang discusses how learner autonomy increased in her flipped reading course at a university in Taiwan. These chapters may be useful for teachers who want to see successful examples of the flipped classroom approach regarding learner engagement and attitudes.

Language learner identity is covered over five chapters in Part IV. Chapter 10, by Boris Vazquez-Calvo, Nikolaj Elf, and Adriana Gewerc, is a useful look at three Catalan-Spanish bilinguals' multilingual practices in their YouTube content creation, largely focusing on how the second languages and/or English are used. This chapter in particular is interesting because it focuses on teenage learners' media creation. Nourollah Zarrinabadi and Ensieh Khodarahmi (Chapter 13) examine the use of Telegram (an instant messaging application) over a semester to foster Iranian English learners' self-concept. They found growth in learners' self-concept, though the nuances of the data may indicate that successes could have actually been attributed to factors other than use of Telegram.

Part V focuses on attitudes and perceptions over its four chapters. Chapter 14 by Gina Paschalidou is a data-heavy report on blogging among Greek secondary school learners of English. It documents the difficulties in implementation of blogging related to learner attitudes, providing an account of waning learner enthusiasm over a term. Goh Ying Soon, Saiful Nizam Warris, and Rasaya Al Marimuthu (Chapter 15) show an interesting use of a Chinese Pinyin Text-to-Speech system through the lens of intrapersonal and interpersonal connections, such as increasing enthusiasm to learn and develop peer support in completing tasks. Chapter 17 by Bin Zou, Sara Liviero, Mengyuan Hao, and Chaoyang Wei examines EAP students' positive and negative perceptions of the use of an artificial intelligence (AI) application to support speaking skills.

The penultimate part (Part VI) concentrates on motivation and willingness to communicate. Chapter 19 by Julia Chen and Dennis Foung examines learning management system (LMS) analytics. The authors analyze learner goals for activity completion and meeting deadlines in a Hong Kong EAP setting. The chapter provides qualitative data on learner attitudes and motivation to progress with work on the LMS related to targets given by the teacher. Chapter 21, by Rebecca L. Chism and Carin Graff, reports on a survey of learners' self-perception, growth mindset, and willingness to communicate in online low-level world languages courses. The section ends with a chapter about the priorities and perceptions of motivational criteria for technology-enhanced language learning written by Pinelopi Krystalli, Pangiotis Panagiotidis, and Pangiotis Arvanitis. This chapter may not help teachers choose what is effective for

learning, but it may inform teachers about the aspects of technology that learners are likely to find attractive (e.g., definition of linguistic learning objectives and immediate feedback).

Finally, Part VII consists of one chapter of concluding remarks by Zarrinabadi and Freiermuth. The editors provide examples of resources such as educational data mining and AI for improving speaking skills and reducing anxiety that appear to be useful but largely untapped. They go on to remind readers that, while technological tools are available to language teachers, such tools are not teacher replacements. Indeed, while the vast majority of chapters report successes in the use of technological tools, these are largely chosen specifically for learners and mediated by language teachers.

As with any book on language education, there are several chapters based on quantitative research with small sample sizes. While these are noted clearly as being difficult to generalize to wider populations, the authors' conclusions at times may be overstated or lack support in their reasoning. Additionally, data triangulation would make for more compelling findings. For example, it would be useful to know how learner behavior interacted with test scores in Chapter 5 on computer-assisted language testing, and to understand how the psychological measures correlated with the number of turns taken in language interactions in Chapter 21 on willingness to communicate.

Despite generalizability difficulties, the benefits of reading about such a wide range of technological interventions provide more than enough compensation. One particular strength of the book is that the authors use a range of technologies from the novel, such as AI applications, to the familiar, like Facebook and blogging. As such, the impression of the collection is unlike most CALL literature. Another advantage is that, instead of an approach based upon snapshots of educational technology trends, technology is applied to foster positive learner psychology. As such, it lends itself to inform pedagogy directly by providing explanations of technology implementations in language learning and detailed learner reactions to them. *Technology and the Psychology of Second Language Learners and Users* shows the possibilities of technology use with language learners and the outcomes regarding learner affective factors, which are increasingly relevant as teachers consider technology integration in their classes and ways to validate its effectiveness.

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