

Book Review

Recent Tools for Computer- and Mobile-Assisted Foreign Language Learning

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Recent Tools for Computer- and Mobile-Assisted Foreign Language Learning

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A review of the volume in the Advances in Educational Technologies and Instructional Design (AETID) Book Series by Alberto Andujar (Ed.), *Recent Tools for Computer- and Mobile-Assisted Foreign Language Learning* (Hershey, Pennsylvania: IGI Global)

Alberto Andujar is the editor of this volume, which contains 15 original research papers, all of which offer valuable insights into the advantages and disadvantages of a current problem of tools used in computer- and mobile-based foreign language learning.

The first chapter by Ana Gimeno-Sanz, Valentina Morgana and Julie Van de Vyver entitled “Understanding Learner and Instructor Attitudes Toward and Use of Mobile-Assisted Language Learning” offers valuable insights into the advantages and disadvantages of using mobile learning in the language classroom, both from a theoretical and practical perspective. The chapter draws a comparison between two audiences, teachers and learners, focusing on the alignment and narrowing of the gaps between learners’ independent use of mobile-enhanced language learning in informal learning and teachers’ perceptions of the use of mobile apps. The authors raise the important question of whether MALL can or should be integrated into the language curriculum. They also assert that mobile learning usually involves the use of mobile technology, whether alone or in combination with other information and communication technologies (ICT), thus enabling learning anytime, anywhere. The authors emphasize that a number of MALL research studies conducted to date provide evidence of the positive effects of the educational use of mobile devices on the development of speaking and writing skills (Andujar, 2016; Lys, 2013; Tuttle, 2013), reading and listening comprehension skills (Hsu et al, 2013; Chen & Chang, 2011), as well as on vocabulary learning (Li & Cummins, 2019; Stockwell & Liu, 2015) and grammar reinforcement (Baleghizadeh & Oladrostam, 2010).

The research is particularly significant because it considered a large sample of university teachers and learners from across Asia, Europe, and North America, which contributes to the overall value of

the research findings. As for the findings regarding teachers, the paper highlights that there should be more communication and information sharing between teachers and learners regarding their mobile practices and underlying motivations. To improve successful MALL practices, teachers need to be trained in technology-mediated task-based teaching and learning (Gimeno-Sanz et al., 2020, p. 27). Furthermore, the authors state that more than half of the students surveyed reported using their smartphones for language learning on their way to and from university. Therefore, teachers should take advantage of this and design activities and tasks that are suitable for completion on the move on a small screen, bearing in mind that the number of additional resources available for completion may be limited (*ibid.*). The study also provides evidence of both teachers' and learners' willingness to implement MALL practices when supported by the use of tools and apps specifically designed for language learning and aligned with SLA methods (Gimeno-Sanz et al. 2020, p. 28).

The second chapter of Jack Burston and Androulla Athanasiou provides a thorough, comprehensive, and up-to-date review of the studies of Mobile-Assisted Language Learning (MALL), covering the period from 1994 to 2018. It focuses on the experimental implementation of mobility-based affordances and applications in language teaching and learning, both L1 and L2. The chapter provides a state-of-the-art analysis of over 2000 MALL studies that have appeared in nearly 500 different journals and presentations at conferences of nearly 300 different professional organizations, the vast majority of both sources being unrelated to language learning and teaching. It also provides thorough background information on the aforementioned studies, documents their deeply atheoretical nature, describes in detail their pedagogical features, and evaluates their learning effectiveness. We think it is worth noting that in the Conclusions section of this study, the authors claim that Taiwan and Japan are the countries where most experimental MALL projects have been conducted. As for the level, the study indicates that it is the university level where MALL has been most concentrated. The results show that student mobile phones are by far the device of choice for MALL implementations. Furthermore, Burston & Athanasiou (2019, p. 54) claim that MALL studies are dominated by a focus on L2 English below the advanced level. The new findings that emerged from this review demonstrated the effectiveness of bibliographic mining in identifying MALL studies in general and experimental implementations in particular, over 2000 for the former and nearly 800 for the latter. As for the linguistic parameters of MALL implementations, this study is the first to document the existence of L1 studies and their focus on literacy. Moreover, this study uniquely tracks the distribution of activity types and linguistic focus over time. We would highly recommend reading it to scholars and practitioners alike, especially those whose research interests lie in the area of mobile-assisted language learning.

Chapter three by Alberto Andujar and Jose M. Franco Rodriguez focuses on exploring university student engagement in a telecollaboration project between a Spanish and an American university. The study is titled "WhatsApp and Jitsi at Foster Student Engagement in a American-Spanish Telecollaboration Exchange" and brings valuable insight into students' cognitive, emotional and behavioral engagement in the project. Student engagement has hardly been studied in the literature on telecollaboration, which have usually focused on factors such as the development of language skills and intercultural competence or the mentoring of language learners among others. Therefore, we believe this study is important for both researchers and practitioners who wish to venture into the field of telecollaboration. The authors of the study point to the advances in technology that have made it possible for students to access videoconferencing through a browser or have a text-based conversation through a ubiquitous device. These new opportunities provide fertile ground for language teachers who are ready to connect classes and implement telecollaboration exchanges over the Internet. Mobile instant messaging services such as WhatsApp, Wechat, Line, and Facebook Messenger allow participants to interact via text messaging, voice recordings, and video calls, allowing participants to communicate ubiquitously across multiple channels. All of these resources can be very useful, especially when teachers need to deliver their lessons online.

The findings of the study highlight the importance of using telecollaboration tools that can also enhance students' emotional engagement during the learning process. Understanding how these tools influence learners' attitudes and behaviors during virtual language exchanges seems to be of great interest in order to adequately develop telecollaboration environments in which students can maximize opportunities for language learning and practice. The authors emphasize, and this is of great importance to all language teachers, that this type of telecollaboration project significantly increases the teacher's workload as the interaction is between peers, and once the process is fully organized, there is no need for the teacher to control or monitor the language exchange in detail. The teacher's role becomes one of monitoring the interaction in the telecollaboration platform and resolving potential problems between participants.

The fourth chapter of this volume is written by Claudio Vanhees, Mathea Simons and Vanessa Joosen and is concerned with identifying the desirability of hyperlink types and frequencies in literary texts. "Desirability of Multimedia Hyperlinks in Fiction to Foster Pupil Reading Motivation and Immersion: Reading Tools for MALL" explores how digital reading aids, such as fiction with multimedia hyperlinks, might appeal to particularly reluctant readers or children from families with low literacy skills. The study found that, on average, teachers marked more explanatory and enriching hyperlinks than students. In addition, the study shows that the desirability of hyperlink types among students and teachers is significantly influenced by literary genre or reading motivation and the importance of students' reading motivation and media use.

The study targeted 102 seventh and eighth grade students (i.e., 12-14 years old) attending a general secondary school (A-school) in seven schools in Flanders, Belgium. The study also targeted 44 teachers, including 7 males (15.9%) and 37 females (84.1%), all of whom have students in grades 7 and 8. The overall results of the study showed that most students found explanatory and enriching hyperlinks desirable across five different literary genres. It was hypothesised that gender plays an important role, as female students on average tick more hyperlinks of both types than their male counterparts, and female bilingual students seem to desire more hyperlinks of both types than other students. As for teachers, the study found that almost all teachers find both hyperlink types desirable in literary texts and on average tick more hyperlinks of both types than students. The study concludes that it would be important for both schools and policymakers to develop well-designed educational policies that incorporate both analogue and various forms of digital reading, thus nurturing future student reading brains that are still capable of performing the processes of "deep reading" that are at the core of expert reading and essential for critical thinking, personal reflection, imagination, and empathy. Finally, the study suggests that authors and publishers should invest more resources in providing digital reading materials with multimedia hyperlinks, as the evidence shown in the study clearly points to the importance of such a form of learning in the future.

The fifth chapter of this volume, authored by Fidel Çakmak, focuses on the use of social network sites (SNSs) for language learning and aims to present an empirical study on the use of Instagram (IG), one of the most popular SNSs, to assess learners' oral communication skills in the foreign language classroom. The author's paper "Social Networking and Language Learning: Use of Instagram (IG) for Evaluating Oral Communication Skill" examines participants' performance scores on an oral communication task set both on IG and in class, as well as their scores on the Big Five personality traits measured by the Quick Big Five Personality Test (QBFPT). The author's study shows that IG significantly facilitated students' performance in oral communication skills and that personality traits did not predict performance on IG, but the extroverts and conscientious have a high probability of scoring high in class. The result of the study, which also examined whether the Big Five personality model can predict students' oral communication performance, suggests that the model does not function as a predictor of performance on IG, yet dimensions such as extraversion and conscientiousness were found to be significant predictors of oral communication performance in class. The author also suggests that the integration of SNSs should be partial, as users do not want to use them exclusively for language learning, but rather from time to time and as a supplement to

extend their learning beyond the classroom context. This should convince even the most timid foreign language teachers to give it a try.

The sixth chapter of this volume is written by Kazumi Matsumoto, Maki Hirotsu and Atsushi Fukada. Their paper “Examining Oral Performance Characteristics of L2 Learners With the CAF Calculator” deals with how a CAF calculator and a workflow for calculating fluency measures were introduced to investigate, accompanied by a study, the utterance fluency of L2 learners of Japanese at two proficiency levels when performing two tasks. The CAF Calculator (CAF is the abbreviation for Complexity, Accuracy, and Fluency) calculates 50 complexity, accuracy, and fluency measures of oral performance. By running CAF Calculator on TextGrid files, objective measures of fluency, accuracy, and complexity are calculated and written to a EXCEL file (Matsumoto et al., 2019, p. 136). The results of their study show significant differences in speed, breakdown, and composite fluency measures between the two groups in both tasks. Task type was also found to have an effect on break locations.

The authors claim that it is useful to review learners’ oral performance on a regular basis. They claim that frequent and fair assessment of oral performance with objective fluency measures is troublesome for teachers and researchers. The authors examined their hypotheses using a sample of 42 native English speakers in Australia and the United States (15 males and 27 females; two unknown) according to I-JAS (International Corpus of Japanese as a Second Language) demographics. All participants were enrolled in Japanese courses at a university in Australia or the US at the time of data collection, and their ages ranged from 19 to 24 (the age of one participant is unknown) (ibid., p. 135).

The results of the study show that CAF Calculator is able not only to produce objective measures of fluency, but also to perform accuracy measures (i.e. the number of error-free As units and the ratio of error-free As units) and a complexity measure (i.e. syntactic complexity), thus enabling language teachers to assess learners’ oral performance from multiple perspectives. In this sense, the study has shown how a freely available learner corpus was used to obtain a decently large dataset, and how fluency analysis tools were used to annotate and compute a large number of objective measures that can be helpful to anyone interested in the field of computer-assisted foreign language learning and assessment.

The seventh chapter of the volume is written by Neasa Ní Chiaráin and Ailbhe Ní Chasaide. Their paper, “The Potential of Text-to Speech Synthesis in Computer-Assisted Language Learning: A Minority Language Perspective” explores the potential of text-to-speech synthesis (TTS) as a tool that can transform CALL (Computer-Assisted Language Learning) platforms. The authors claim that by integrating TTS, the platform facilitates literacy training, always focusing on spoken language (they focus on Irish language). Prompts are delivered in both spoken/audible form (with TTS voices) and written form. The platform is designed to monitor learner progress throughout the process and records of the process are collected for future research. This study explores the great potential of TTS technology in language pedagogy, which has been relatively under-researched. It is worth noting that while Irish is an official language of the state and as such is widely taught in Ireland, it is also a minority language spoken as a community language in some areas, mainly on the west coast. This makes the social and linguistic context quite different from mainstream languages, and there are many specific challenges that arise when teaching a minority language where access to native speakers is limited.

The authors claim that TTS has yet to gain widespread acceptance in CALL (Gupta & Schulze, 2012), although this situation is beginning to change. The reason for this is the low quality of some TTS systems with unnatural speech quality (Sha, 2010). This study illustrates that the iCALL platform is only one way in which TTS can be used. It serves as an illustration of how classroom activities can be enhanced through autonomous learning with instant personalised feedback in an interactive environment (Ní Chiaráin & Ní Chasaide, 2019, p.163). It also provides a holistic language learning experience that focuses on spoken language and closely integrates writing and reading skills. This

immediate access to native language is particularly important in minority language settings and would be recommended in cases of minority language learning on a global scale.

Chapter eight of the volume is authored by Josef Buchner and Julia Weißenböck, whose paper “There Is Nothing to See. Or Is There? Visualizing Language Through Augmented Reality” focuses on augmented reality and its potential of transforming teaching. Authors claim that by applying this technology, students progress from consumers of technology to producers of their own digital content, and they can make it available to a large audience and create an immersive learning experience. Augmented reality has proven to successfully combine language and digital skills and has shown to motivate students to engage even deeper with their topic. The authors emphasise that while most studies focus on how AR can be used for teaching and learning, only a few focalise on students’ own production of AR content. In the conclusion section of their study, the authors emphasize through the application of modern technology, in this case AR, that a traditional language-learning scenario was transformed into a design-based learning experience. This learning experience was highly motivating for the participating learners and AR as a technology was also accepted by the majority and considered valuable for the learning and design process.

Chapter nine of the volume is authored by Barbara Conde Gafaro, who discusses the role of Massive Open Online Courses (MOOCs) in foreign language education. Her paper explores the relationship between MOOCs and self-regulated learning and addresses the reuse of content-based MOOCs as supplementary materials to promote students’ self-regulated behaviour and practise of the target language both inside and outside the language classroom. The paper “MOOCs in the Language Classroom: Using MOOCs as Complementary Materials to Support Self-Regulated Language Learning” explores the issue of self-regulated language learning in a blended context with content-based MOOCs. They can be described as the development of online learning on a large scale (Daniel, 2012). They are designed for a large number of participants who can access the courses anytime and anywhere as long as they have an Internet connexion (McAuley, Stewart, Siemens, & Cormier, 2010). For those who wish to investigate further, the term MOOC was coined by Dave Cormier to explain a way of learning in the networked world (Cormier, 2010), which began in 2008 with an online course called Connectivism and Connective Knowledge (CCK08) facilitated by George Siemens, Stephen Downes and Dave Cormier at the University of Manitoba in Canada (Cormier, 2008). The author claims that in terms of foreign language learning, content-based MOOCs can potentially provide students with flexible learning opportunities to enhance their self-regulated behaviour and practise their target language while accessing knowledge that may be relevant to their personal or academic interests. In the present study, the author has focused on the integration of content-based MOOCs as blended elements in classroom-based language courses and, in particular, considered the possibilities of such integration in terms of students’ self-regulated learning and target language practise inside and outside the classroom. She also suggests that future research in this area of educational technology and language learning should examine the role(s) of language teachers who choose to implement these blended MOOC practises that focus on promoting students’ self-directed learning. In conclusion, the author advises language educators and researchers to explore the design and implementation of classroom activities involving MOOC content or resources that would help learners assess their learning and allow them to reflect and adjust their performance as they practise their target language.

The tenth chapter of the volume is written by Pablo Armando Alcaraz-Valencia, Laura Sanely Gaytán-Lugo, Sara Catalina Hernández Gallardo, and Rocío Maciel Arellano. Their study entitled “The Role of Technology in Audio Text Comprehension for English as a Second Language” deals with the development of listening comprehension skills in learning English as a second language from a theoretical perspective. The authors tried to conceptualize symbolic competence through ecological theory in order to design computer-assisted language learning practice. The results of their research led to the conclusion that a guide for building a specialized technology for learning English as a second language does not exist. The authors point out that various technologies have been used over the years to develop the skills associated with this learning process. They emphasize that a guide

on how to design specialized technology for the development of listening comprehension skills in English as a second language acquisition does not yet exist, so the present study attempted to provide (from a theoretical basis) a starting point for the creation of such specialized language learning tools.

Chapter eleven of the volume is authored by Julie Damron and Jennifer Dobberfuhr Quinlan whose work “Student Binge Studying, Recall, and Success in a Blended Korean Class” aimed to examine binge learning in two, beginning university Korean courses in relation to success on exams, overall course grade, recall of the language after a four-week break, and continued enrollment in Korean. The results of their study show a correlation between total page views and course grade, between total page views in 101 and retention in 102, and a correlation was also found between binge-studying and grade in 102. The authors contend that due to the availability of online instruction, convenience for students and instructors alike, and accommodations for diverse groups of students, online courses are becoming more common and more freely offered today. The study examines the distance education landscape in general, including important elements that can contribute to success in online courses. The authors also discovered only a very weak positive correlation between total page views and success in Korean 101 and an even weaker correlation between total page views in 101 and retention in 102. As predicted by the researchers, students actually accessed course content 20% or more more frequently in the month of December than in the other months of the semester, indicating binge learning. Despite evidence that over 75% of students binge-learned, these students appeared to perform better on the Korean 101 final exam, and there appeared to be little correlation between binge-learning behaviour and scores on the 102 assessment (an indicator of retention). To reduce binge-learning, the authors suggested pausing the online elements of the course, and finally, the authors advised students to evenly distribute their work in the course to increase their retention performance.

The twelfth chapter of the volume is authored by Maria Del Mar Sanchez Perez and Alicia Galera Masegosa. Their paper, “Gamification as a Teaching Resource for English-Medium Instruction and Multilingual Education at University,” focuses on the phenomenon of gamification, which has emerged in recent years as a resource that incorporates game-related elements and mechanics into the classroom to enhance student motivation, engagement, and other competencies. More specifically, the authors’ study provides an overview of some recent computer-based gamification tools that can be used in EMI and multilingual university environments. It also examines in detail the main features and benefits of these tools for these specific educational contexts. The authors have identified the need to integrate innovative teaching techniques in multilingual and EMI university contexts, with most empirical studies showing positive outcomes in gamified courses, positioning gamification as an effective tool that promotes motivation and engagement in education, which can ultimately lead to better outcomes. The article provides a thorough analysis of the main features of Classcraft, Kahoot, and the TeCoLa project as gamification tools, suggesting that multilingual and EMI higher education contexts can benefit from incorporating these computer-based applications. Despite their differences in purpose, functionality or technical considerations, they all share a number of benefits, including the promotion of classroom dynamics, collaboration, solidarity and accountability. In this sense, the authors consider it important to stress that both practitioners and institutional authorities should be aware of the urgent need to take the necessary measures to integrate digital and ICT competences into higher education curricula, especially in EMI contexts where both learning and teaching disciplinary content in a non-native language presents a double challenge.

Chapter thirteen of the volume is written by Jane Vinther and Jørgen T. Lauridsen, who focus on motivation in relation to learning a foreign language in their detailed study of students’ attitudes to a detailed field of factors involved. Their study titled “Digital Literacy and Motivation: How Students Evaluate Digital L2 Learning” examines digital learning of an L2, which the authors find is correlated with levels of language learning anxiety, willingness to communicate in the L2, attitudes toward feedback, and preference for teaching methods. The authors’ main finding is that intrinsic motivation is the strongest driver compared to other motivational factors. The study presents findings that aim to

fill a gap in the corpus of research on CALL and learners' beliefs about CALL. The central finding of the study is that L2 learners in the digital learning environment show an overall strong presence of intrinsic motivation combined with instrumental and integrative motivation. The results also show that motivational forces may vary in strength depending on the L2. It seems to the authors that the integrative and thus cultural aspect is more pronounced in L2s such as French and Spanish, but less so in English. The fact that the integrative motive is less strong for English might be related to the global and lingua franca aspects of English.

Chapter fourteen of the volume is written by Alice Meurice and Fanny Meunier whose paper "Designing In-Service Teacher Training for computer and Mobile-Assisted Foreign Language Learning: A Mixed-Methods and SWOT analysis of TELL -OP Training Module for Language Professionals" focuses on a teacher training course (INSET) organized to promote the use of open natural language processing (NLP) based technologies (NLPTs). The author's paper is divided into three sections, the first dealing with the possibilities of technology for second language acquisition and highlighting the potential of open NLPTs, the second with a presentation of the overall design of INSET, which was used in the TELL -OP ERASMUS + project, and finally the third section dealing with a quantitative and qualitative analysis of questionnaires and feedback data from Belgian French-speaking teachers (n = 86) on the TELL -OP online training module. The authors agree that finding a smooth integration and actual use of new tools inside and outside the classroom requires time, patience, and long-term, repeated interactions between teachers and teacher educators. It also often requires change in both INSET and classroom practice, where cultural and functional habits must be gradually altered in addition to the technical aspects. The authors also suggest that close collaboration should be sought between teachers and researchers, as it often seems that the latest tools and research findings in applied language acquisition research do not reach L2 teachers and their learners. The paper concludes by noting the importance of what L2 research can offer to address the needs of teachers and learners in their respective contexts, but also to provide teachers with supportive pedagogical materials and appropriate teaching methods and practices that concretely integrate the use of new tools and techniques.

Chapter fifteen is written by Alberto Andujar. His paper, "Analyzing WhatsApp and Instagram as Blended Learning Tools", deals with the literature examining the use of WhatsApp and Instagram applications to promote language learning from a theoretical point of view, as well as the results of the studies conducted in these two areas. In the results section, the author points out that a growing number of studies use the WhatsApp application to develop either blended learning models or online tasks in foreign language courses, while research investigating the use of Instagram for language promotion is very scarce. The paper provides a tremendous review of the literature in this area, which will be useful for future researchers in this field. The author also points out a lack of cross-cultural studies examining the use of these applications, and therefore the information presented is mostly very limited. The author further highlights the fact that these tools are relatively new; there is also a lack of models to follow when using these social networking tools, as well as certain misconceptions regarding their use. The author concludes his paper by stating that besides developing new technological advances that can help improve the language learning process, the researchers of CALL and MALL should also focus their attention on accessible existing applications and tools that can help promote students' competence and that still need to be explored.

Overall, the volume offers valuable, usable and, above all, very detailed findings and literature on the latest developments in mobile - and computer-assisted - language learning, which has become quite a challenge in recent months when online learning has become commonplace due to the global lockdowns associated with the Covid 19 pandemic. The volume is also useful for those technology-savvy and curious language teachers who have been forced to tackle an entirely new teaching approach virtually overnight.

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