CALL Technologies and the Digital Learner: Introduction

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Unlike any other time in the era of emerging technologies, the last two decades of the twentieth century saw an explosive growth of articles, monographs, books, and conferences on CALL and multimedia applications to language teaching and learning. Today, no one disputes that our world is characterized by unprecedented rapid technological changes. Instructional technology (e.g., Internet, CALL software/authoring tools, AI systems, WebCTs, blackboards, distance learning, electronic dictionaries/books, hypertext annotations, corpus linguistics, human language technologies, speech technology, machine translation, discussion lists, e-mail, chat rooms, and the like) has long been thought to aid and influence the level of language learning and acquisition. Many language instructors are already convinced of the immense value that instructional technology can have for their teaching. Despite its overwhelming acceptance and great potential for the future, instructional technology must be used with specific pedagogical ends in mind, and not just as a novel diversion if it is to help facilitate language learning and acquisition. By extension, the greater the multiplicity of media forms, the greater our responsibility to support language learners in becoming more aware of the variety of meanings inherent in these forms.

In celebration of the 5th Anniversary of the founding of *The Reading Matrix: An International Online Journal*, the **Reading Matrix** is pleased to bring you a special issue on "CALL Technologies and the Digital Learner." The principal aim of this issue is to explore the relationship between CALL technology and language teaching/learning broadly conceived (i.e., foreign/second language teaching, EFL/ESL, bilingualism/biculturalism). This special issue offers a variety of articles that are both research-based and theoretical, as well as articles, commentaries, and book reviews which are more pedagogical in content.

In 'A Template to Generate Hypertext and Hypermedia Reading Materials: Its Design and Associated Research Findings,' Robert Ariew describes the design and use of a software template to generate hypermedia texts for use by foreign and second language students. Following a theoretical discussion of the issues dealing with models of reading comprehension, the Mental Effort Hypothesis, and the Dual Coding Theory and Multimedia Learning Theory, Ariew reports on studies involving annotations and hypermedia before presenting the template design, the studies using the template, and the research findings of these studies. Ariew concludes that, based on the studies conducted using the template, "the design and implementation of hypermedia or hypertext materials are important factors in reading comprehension" (p. 207) and, furthermore, that "the way that annotations are accessed and presented and the way the software behaves may have an impact on readers' comprehension" (p. 207).

'Artificial Intelligence and Idiomaticity,' by John I. Liontas, expands the discussion of 'template' design to the domain of artificial intelligence (AI) and idiomaticity. The author speculates about how AI technologies might be used to foster knowledge of idiomaticity in the future. He argues that the deployment of AI knowledge systems for idiom learning require critical examination. Following a brief theoretical discussion of the Cognitive Theory, Liontas extends the cognitive approach to multimedia CALL software design and suggests that AI knowledge systems can aid the development of idiomatic competence. These should be incorporated into the design of multimedia programs for first and second/foreign language learners as early in their education as possible. Liontas concludes with potential applications of future AI knowledge systems for idiom learning.

In 'The Face-to-Face and the Online Learner: A Comparative Study of Tutorial Support for Open and Distance Language Learning and the Learner Experience with Audio-Graphic SCMC,' Fernando Rosell-Aguilar reports on a large-scale quantitative study into the student population of the online and face-to-face versions of a language course to find out whether there are any salient differences. He also reports on a smaller group of students and their impressions of audio-graphic conferencing and learning with it, as well as their reasons for choosing to use Synchronous Computer-Mediated Communication (SCMC) over face-to-face. Rosell-Aguilar concludes that more such studies are needed in finding out what differences there are between good online and face-to-face learners.

In 'Language Learning in Tandem via SKYPE,' Antonella Elia continues the discussion of online language learning by introducing *Mixxer*—an educational site created to help students and teachers find partners for language exchanges—and *Skype Casting*—the merging of Skype (the largest of the new companies offering Voice over Internet Protocol) and Podcasting. She suggests that "the developing of Skype intertwined and interconnected with Podcasting can be a challenging frontier in expanding the horizon of language learning online" (p. 275).

In 'Designing a Corpus Based English Reading Course for Academic Purposes,' Yasemin Kırkgöz examines the steps necessary in compiling a corpus of academic texts from the disciplines of economics and business administration to design a lexical component of the English reading course for Academic Purposes (EAP). Kırkgöz focuses on the importance of basing the EAP course on data-driven learning, and structuring it around a task-based approach that emphasizes the constructivist nature of learning. She concludes that corpus-based data helps students become familiar with the fundamental concepts of their discipline, especially when they are asked to become actively involved in the learning process.

In 'Theory Driven Technologies: Frameworks for Individual Language Learners,' Cindy Brantmeier, Luisa Flores, and Gabriela Romero-Ghiretti report on two different computer-assisted language learning (CALL) projects created for intermediate Spanish classes. One of these concentrates on advanced grammar and composition through exposure to authentic, literary texts while the other examines the diverse activities of Hispanic artists, educators, and entrepreneurs living and working in the area of Pilsen in Chicago. The authors maintain that second language pedagogical practices and CALL should be connected to relevant theory and empirical research in Applied Linguistics and Second Language.

In 'Reading-Oriented Internet-Assisted Teaching of L3 (Spanish) on the Basis of L2 (English),' Oleg Tarnopolsky and Oleg Nesterenko propose the development of a particular approach to Internet-assisted teaching of Spanish as L3 to students at a tertiary educational institution majoring in English (L2). Based on a prolonged pilot study, the impact of the developed approach on students' progress is analyzed and discussed based on seven distinct guidelines.

In 'CALL Technologies: Survey Responses Concerning University and School Systems' Responsibilities,' Hsuying Ward and Rita Mulholland summarize information gained from an email survey and phone interview with EL teachers and school administrators concerning the use and availability of CALL technologies. Following the review of the literature, the authors then highlight the roles and responsibilities of the universities and the public schools in providing the resources and training needed to effectively incorporate CALL technology into the instructional program to support EL students' language learning. Finally, the authors urge universities and school systems to bring CALL into EL classrooms for the benefit of second language learners.

In 'Determinants and Effects of English Language Immersion in Taiwanese EFL Learners Engaged in Online Music Study,' Robert E. Beasley, Yuangshan Chuang, and Chao-chih Liao report the results of a study aimed at identifying the factors that determine English language immersion (ELI) in Taiwanese EFL learners. A further aim of the study was to determine if ELI is a predictor of change in vocabulary level and American lifestyle literacy during online music study. Based on the results of the study, the authors suggest that while age, gender, and academic standing are all determinants of ELI in Taiwanese EFL learners, ELI alone is not a good predictor of change in vocabulary and lifestyle literacy acquisition during online music study. More importantly, some minimal level of English competency may be required to benefit from online learning music environments.

In 'Do High Schools or Private Institutes Practice Communicative Language Teaching? A Case Study of Shiraz Teachers in High Schools and Institutes', Seyyed Ayatollah Razmjoo and Abdol-Mehdi Riazi explore high school and institute teachers' attitudes toward communicative language teaching (CLT) within the context of an expanding circle (Iran) where English is practiced as a foreign language. Following the administration of a questionnaire to 100 male and female high school and institute teachers and based on the descriptive and inferential analysis of the data, the authors found that high school and institute teachers' attitudes toward the CLT principles are positive. Most importantly, as the authors correctly assert, the results of this study highlight clear implications for policy makers, language-planners, curriculum designers, textbook developers, language instructors, teachers, and also learners and their parents as regards the 'effective' practice of CLT principles in Iran.

In 'Second Language Classroom Reading: A Social Constructivist Approach,' Lianrui Yang and Kate Wilson explain the constructivist approach to teaching reading to students of English as a foreign language. The authors suggest that a dialogic approach to reading can empower readers to become active participants in making meaning together with the text and its authors. To accomplish this end, readers must be willing to engage in new reader-roles, take a strategic approach to reading for meaning, and use scaffolding as a means to developing effective, independent reading strategies and dispositions that suit their own needs and purposes. Practical suggestions for teaching reading in the Chinese classroom comprise the main body of this article

which, according to the authors, are likely to "transform the rhetoric of social constructivist discourse into classroom realities" (Abstract, p. 364).

In 'Reading First: An Alternate Discussion,' Nicholas Paley shares in his commentary his personal methodology that might help promote doctoral student writing fluency. To underscore the enduring relevance of Madame Bovary's advice 'Read in order to write,' Paley comments on the work of Leila Berg, Robert Coles, and Bob Dylan, whose work is not ordinarily cited in the research literature, but whose views, according to him, provide a unique perspective to the reading-writing connection.

In closing, the advent of new CALL technologies presents language practitioners and SLA researchers alike with new challenges and opportunities to take a fresh look at the possibilities such technologies may provide for language learning in general and language acquisition in particular. I am are very grateful to our fine Editorial Board and would especially like to thank all the authors who contributed to this special issue, and reviewers of *The Reading Matrix* whose expertise and hard work have made this issue possible. I would also like to thank my Editorial Assistant, Karen E. Capullo, and my Research Assistant, Emilie L. Hebdon, for their attention to detail which is greatly appreciated. All of us at *The Reading Matrix* sincerely hope that readers will find this compilation of articles and reviews to be of interest and relevance to the issues they face in their professional lives as researchers, teachers, teacher trainers, program administrators, or curriculum developers. One thing is certain: the relationship between CALL technology and language teaching/learning will continue to challenge our collective intellect in the years ahead.