In Theory – We Could Be Better

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The first issue of the 32nd volume of CALICO Journal marks a new beginning. This issue is the first available exclusively through Equinox Publishing (http://www.equinoxpub.com/home/journals/calico). The CALICO Journal was first published by CALICO in 1983 – which makes it the publication on CALL with the longest pedigree. The Journal appeared online as well as print form and then migrated to online only in 2007 (issue 25.1). Since 2011, it has been produced and published on the Open Journal System (OJS). It became apparent to us that the ‘in-house’ publication by CALICO would not be sustainable over the long term and we began to explore other options in early 2013. The resulting partnership with Equinox Publishing was sealed the following summer. During the transition period over the last couple of months, the 31-year archive of the Journal has been transferred to the OJS at Equinox. The databases with authors, reviewers, subscribers, and registered readers are also fully functional on the new OJS server. We are very grateful to colleagues at Equinox for the commitment to the CALICO Journal, their immense work during the transition, and their professional support. We have had every indication that the members of CALICO, our authors and readers, and the scholarly CALL community at large will reap substantial benefits from this new beginning. The Journal will continue to contain high-quality research articles on CALL and reviews of learning technologies and relevant books, which will appear three times a year in January, May, and September. Reviews will remain open access at http://www.equinoxpub.com/journals/index.php/CALICO; and research articles will become open access after a three-year embargo period. With the help of Equinox, this research and the reviews will reach a much
wider, more international readership and the *Journal* will have more exposure in the world of research and publishing.

We would like to use this new beginning as an opportunity to plead for a concerted effort by *CALICO Journal* authors and scholars to further improve the basis of research in CALL. In 1997, Chapelle argued that ‘CALL would benefit from addressing questions similar to those posed about other L2 classroom learning and from applying the methods used to study L2 learning in other types of classroom activities’ (p. 19). As she asserts in her article, the underlying challenge is the lack of a well-founded and robust research paradigm in CALL. So that a scientific paradigm – of ‘universally recognized scientific achievements that, for a time, provide model problems and solutions for a community of practitioners’ (p. 10) – can provide the cornerstones for research in CALL, we need to ask questions about the relevant ontology (what is it we want to know and observe, how can it be categorized?), epistemology (what can we know of it, how can this knowledge be developed?), and methodology (how can we find out about it?). The answers to these questions need to be commensurable, so that the scientific paradigm is coherent and the practical research based on it is effective.

More and more researchers in Applied Linguistics pre-suppose – to answer the questions on ontology – that language is emergent and consists of linguistic constructions (Tomasello, 2003), which are acquired through common cognitive processes (Langacker, 1987). Language use and language development – both in the L1 and the L2 – are in a dialectical relationship. On the one hand, an individual’s second-language development (SLD) is a complex process, which is embedded in and determined and influenced by social, historical, and cultural processes. On the other hand, each individual participates in the co-construction of social, historical, and cultural processes through second-language use (Lantolf, 2006). Language learning processes are complex and multivariate (Larsen-Freeman, 1997) and, therefore, SLD as a dynamic system is nonlinear. Consequently, we have to exclude linear and static metaphors, which are frequently employed in SLA research and language pedagogy, e.g., the linearity of mastery learning and programmed instruction and the assumptions of linearity of cause and effect in studies with a pre-test/post-test research design; and we are grappling instead with the nonlinear nature of language-learning processes in CALL.

In our epistemology, we can observe the behaviour of individual language learners over time and infer information about individual cognitive variables. However, when reasoning about observed CALL processes, we need to be aware of its limitations. Language-learning processes – complex adaptive systems – are deterministic, but cause-effect relationships are complex and often disproportionate and therefore frequently unpredictable. Thus,
the predictive power of approaches such as Complex Systems Theory and Sociocultural Theory is limited, certainly in such complex social systems as computer-assisted language learning. However, these theories have considerable explanatory power. We are able to trace back and explain certain features of a current language-learning behaviour or of learning outcomes to a possibly small change in one or more variables much earlier in the process.

For this, we need to consider appropriate methods in CALL research. The main goal of our analysis of learner-computer interaction ought to be detecting, localizing, describing, explaining, and interpreting change. Change refers here to both the variation of one or more variables or components of a language-learning process because of their interdependence and interaction and the change depicted in the developmental trajectories of individual learners or learner types during the process. Two guiding principles are particularly important to the selection and application of appropriate methods. 1. longitudinal, multivariate analyses of language learning processes are necessary; neither reductionist snap shots in cross-sectional quantitative studies nor isolated qualitative case studies are sufficient to investigate change in learner-computer interaction and SLD in CALL. 2. the complexity of these processes and, consequently, the difficulty with and the low likelihood of predicting their future states accurately means that we need to identify (qualitative) retrodictive methods of analysis (Dörnyei, 2014). Such methods reverse the process of analysis so that the outcomes are considered first, and then their development is traced back to determine which components and variables induced or caused change. Quantitative approaches (large longitudinal data sets with high density) (Larsen-Freeman, 2006; Verspoor et al., 2011), metaphorical qualitative approaches (e.g., thought experiments, (Larsen-Freeman and Cameron, 2008)), and mixed methods combining cross-sectional cluster analysis over time with the qualitative analysis of developmental trajectories and outcomes of the language learners – are all possible. Through these methods, the multitude of interacting variables in the process and its context have to be considered.

Whereas some theories of second language acquisition conceptualize language learning as a social process and others as a cognitive one, we should strive towards analysing the two in conjunction with one another. Larsen-Freeman argues that ‘we should be looking for how to connect cognitive acquisition and social use … Forcing us away from reductionism and towards holism’ (Larsen-Freeman, 2002). The theoretical framework of complex adaptive systems, for example, intends to ‘describe and ultimately explain how language as a complex system emerges and develops over time, both as a social instrument in groups and as a private tool in individuals’ (de Bot et al., 2005: 117). Emergence, which is central to how a complex process functions and indeed adapts, can be largely
attributed to its ability to self-organize. This self-organization implies constant change. In the complex process of computer-mediated language learning, the learner is thus one, albeit important, actor – under the dialectic of autonomy and heteronomy – who contributes to and influences the emergent language use of L2. Other variables and their change through their interdependence need to be considered in specific contexts and over time.

We would welcome more studies that are rooted in comprehensive, coherent theories of (computer-mediated) language learning, theories that embrace change and variability among individuals and over time. Researchers in CALL need to have a thorough understanding of frameworks such as Activity Theory and Complex Systems Theory and apply them comprehensively and not only select one concept in isolation. Studies based on such theories need to be longitudinal, non-reductionist, and sensitive to contexts. Commensurate methods facilitate the investigation of nonlinear change, the complex unity and conflict of opposites, developmental trajectories of individuals in social groups, and the role of technology as one complex component of a complex process.

As we also see in the articles of this issue, CALL is particularly well suited to conduct comprehensive analysis of learner behavior over time because of the ease and scope with which digital technology can gather process and product data. In this issue we have one invited state-of-the-art review and six articles as well as three learning technology reviews and one book review.

Denis Liakin, Walcyr Cardoso, and Natallia Liakina investigate the use of automatic speech recognition (ASR) in mobile-based pronunciation instruction. In a pre-test/post-test design, the ASR Group improved significantly from pretest to posttest in /y/ production whereas the non-ASR and control group did not. No group improved in /y/ perception. The authors discuss several theoretical and pedagogical reasons for using mobile-based ASR technology for improving pronunciation.

Ursula Stickler and Lijing Shi employ eye-tracking technology in exploring what learners of Chinese attend to during two online activities – one a reading task and the other a synchronous voice chat task. Learners also completed a questionnaire and engaged in a stimulated recall using the playback
of the gaze plot video. The amount of learners’ eye fixations on the Pinyin and characters varied as a function of their overall target language proficiency, which was confirmed by the stimulated recall data. Their results bring new insights to the debate of whether and for how long teachers should use Pinyin in teaching Chinese.

In ‘Giving and receiving advice in computer-mediated peer response activities’, Mei-Hsing Tsai and Celeste Kinginger use a conversation analysis approach in exploring how advice givers and recipients manage the asymmetrical participant roles inherent in L2 peer review activities in a university writing classroom context. They discuss the strategies that advice givers employ in order to maintain solidarity and avoid potentially face threatening acts that arise by virtue of the peer review task itself, which requires a critical evaluation of another’s work.

In ‘An analysis of social network websites for language learning,’ Min Liu and colleagues consider both teacher and student perspectives as they examine the affordances and features of four selected social network sites for language learning in terms of their usefulness for language teaching and learning. In addition to the general finding that such sites have the potential to facilitate language learning, their findings draw on socio-constructivist theory to show how one can use SNSLL as teaching tools. They also highlight the importance of considering the website’s information, interface, and interaction designs.

Yea-Ru Tsai uses the Technology Acceptance Model in investigating the perceived effects of using a course management system (CMS) to support English writing improvement. Tsai compared two methods of delivering instruction – a more traditional approach and one that used the Black Board CMS. The results showed that the CMS group significantly outperformed the non-CMS group in the final drafts of their writing assignments, with learner attitudes being the major factor influencing learner use of the CMS. Tsai offers several suggestions for influencing learner beliefs about using a CMS for language learning.

In ‘It takes research to build a community’, Melinda Dooly calls for a strengthening of ties among the international research community engaged in Digitally Supported Communicative Language Teaching and Learning (DSCLT). She provides an overview of emerging areas of study related to DSCLT, outlining many of the challenges facing transglobal CALL researchers, and offering some avenues for navigating these challenges.

The issue is rounded out with software reviews by Abigail McMeekin of Mango Premiere and Mango Conversations (both for English speakers) as well as Son pour Son: Programme d’entraînement à la prononciation française by Ludovic Ibarrondo and one book review by Elzbieta Gajek of Online Teaching and Learning: Sociocultural Perspectives.
Note

1. This plea is based on excerpts from a chapter draft by Mat for the book Learner Computer Interactions: New Insights on CALL Theories and Applications edited by Catherine Caws and Marie-Josée Hamel.

References


