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EDITORIAL

Research challenges in CALL

The theme of the XVIth International CALL Research Conference 2014 in Antwerp was “Research Challenges in CALL”. Before discussing the main results of this conference, it is perhaps useful to briefly describe how this theme came along.

As editor and associate editors of this journal, we can look back with many other experienced CALL researchers on an exciting couple of decades characterized by numerous changes, expanding horizons, and increasing diversity. We have learned not just to talk but more importantly to listen, to focus on real needs instead of false goals, and to encourage instead of criticize. Our primary concern is to guide and support the new generation of researchers whose biggest concern is to survive in these meritocratic times. They are under huge pressures. Listening to their presentations at conferences (but also to their aspirations during coffee breaks), evaluating their papers and project proposals, and reading their messages and posts, we constantly feel their pulse.

Together with the other members of the editorial board of Computer Assisted Language Learning, we have been serving as the scientific committee for the International CALL Research Conferences since 2002, in an attempt to reflect the most common concerns and issues:

XIIth edition: “How are we doing? CALL and Monitoring the Learner” (Antwerp, 2006)
XIIIth edition: “Practice-Based & Practice-Oriented CALL Research” (Antwerp, 2008)
XIVth edition: “Motivation and Beyond” (Antwerp, 2010)

The topic of “Research Challenges” was first touched upon by Phil Hubbard in 2002, when he conducted his survey of Unanswered Questions in CALL (http://web.stanford.edu/~efs/callsurvey/), published in this journal as Hubbard (2003). More and more books (such as Chapelle, 2003; Egbert & Petrie, 2005; Levy & Stockwell, 2006; Beatty, 2010; Leakey, 2011; Stockwell, 2012), articles (such as Kern, 2006; Chun, 2012; Smith & Schulze, 2013), and PhD theses (such as those by Cédric Sarré, Ana Sevilla, Qing Ma, José Macario, Aga Palalas, Joost van Doremalen, Liliana Cuesta, Frederik Cornillie and Ambra Neri) have been discussing the topic in more or less depth ever since.

Jozef Colpaert combined these views with his own experience in CALL, and presented the resulting “XII Labors” during his keynote at WorldCALL 2013 in Glasgow. He identified 12 main challenges and grouped them into three categories: contextual, methodological, and epistemological challenges. The contextual challenges included academic meritocracy, academic value of CALL, myths/hypes, and broad-public perception of CALL activities. The methodological challenges included design, replication, slow
research, and transdisciplinarity. Finally, the epistemological challenges could best be represented by four adjectives: open, psychological, smart, and sustainable.

These three categories were then integrated into the design of the CALL 2014 conference itself: keynote speakers Bryan Smith and Piet Desmet tackled the contextual challenges, while the submitted research papers had to focus on methodological aspects of the participants’ current research. Interactive discussions with the audience would then deal with and decide on the epistemological challenges we defined together.

These epistemological challenges have an additional important purpose in our academic context. If we want academic evaluation to become more objective, fair, and justifiable, then challenges need to be defined clearly in advance. We wanted this conference to be a catalyst for discussions regarding the question: What priority research topics can be defined by our community? We hoped this would lead to a document that can be referred to by all CALLers worldwide for supporting their research proposals.

CALL 2014 eventually brought together around 97 researchers in Antwerp. We asked all participants to complete the following sentence: “What the CALL field needs, is to find the answer to the question...”. After analyzing the tweets, messages, and interactions, including an in-depth analysis of all long abstracts submitted for this conference, we came up with 24 topics to be voted upon during the last sessions. For practical reasons, we subdivided these topics into six main categories:

Psychology:

Identity
Autonomy
Motivation
Perception, attitude towards ICT

Design:

Learner differences and variables
Visual design
Design as a process and sustainability
The learning environment as an ecology

Technology:

New technologies: Cloud, Twitter, Facebook, webquests, games, mobile devices, TTS, robots...
Dedicated tools: textual enhancement, video annotation (subtitles, captions...), comic creation, digital storytelling, translation, paraphrasing and writing assistance, ASR and CAPT, corpora...
Intelligent, smart adaptivity
Teacher training

Research:

Method: treatment-analysis experimental research, action research, design-based research, ethnographic approach, replication...
Focus: effectiveness, process, theory development...
CALL as research object: bibliometrics and evaluation of CALL research; better use of findings from related (neighborhood) disciplines; theory-driven and practice-driven CALL

Data gathering: learner analytics, corpora of interactions, screen capturing, eye tracking

Linguistics:

Language: skills, vocabulary, grammar (tenses), discourse, pronunciation, intercultural competence, formulaic expressions, idioms, collocations, accuracy, fluency...

Language use: academic reading and writing, translation, LSP...

Minority, endangered, indigenous, ancient languages

NLP: ASR, half-open answers...

Pedagogy:

Theoretical models: TBL, activity theory, connectivism, complex dynamic systems...

Learner training

Education levels: higher, secondary, primary...

Secondary learning objective: critical thinking, telecollaboration, lifelong learning...

The ordering and weighting of results garnered from the CALL experts present at the conference is illuminating. The priority research topics in CALL in order of precedence were Pedagogy (28.9%), Design (27.8%), and Research (18.6%) followed equally by Psychology, Linguistics, and Technology (8.2%). Broadly speaking, the results set the categories into three groups, Pedagogy and Design valued equally, Research, and then at a considerably lower level the other three. The results show that participants rated the high-frequency topics at more than three times the importance of the low. The fact that the figures were generated through a snap poll does not reduce their value as a catalyst for consideration and reflection. Moreover, in our view, the results are instructive not only in focusing attention on those topics placed highly: they are of equal importance in assessing the value to CALL of the remaining topics, the disciplines of Psychology and Linguistics together with technology. In viewing CALL from the outside, one might have argued that the status of these three areas would be foundational and that they would guide and direct CALL activity and provide its principal models and frameworks across the dimensions of research, development, and practice. And yet, the results portray a rather different story. The relative weighting of these key areas of CALL is most worthy of further reflection and discussion.

Pedagogy and Design came through convincingly in first and second positions with more than a quarter of participants rating these areas highly. Such results speak directly to the primary concerns and interests of the CALL experts present at the conference. They reflect a keen interest in the importance of practice. Through Pedagogy, we see value in thinking seriously about the nature of the learning environment and the factors that influence success within it. Pedagogy is about good teaching, and for those in CALL, investigating ways in which different technologies may be employed to enhance and promote it is paramount. Investigations lead to greater understandings of the key components such that the parts contribute effectively to the workings of the whole. This leads us to Design. CALL Design is about constructing CALL environments purposefully such that
learning does not occur by accident, but through an understanding of the key factors or variables that impact upon it. It also involves the creation of custom-made artifacts and learning environments such as language learning apps and websites, and further, most critically, the use of systematic approaches to the processes of design such that new materials are rigorously evaluated and tested. Together, this focus on Pedagogy and Design identifies the CALL practitioner. Thus, while theory might be referred to, there remains a keen interest in what works in practice. Further evidence in the results support this view with the recognition of the importance of learner training, for example, whereby learners, rather than simply being placed in front of a computer in conditions with which they are unfamiliar, are properly prepared beforehand such that they know how to make optimal use of the learning materials made available to them.

The third priority research topic in CALL recorded by respondents in the survey was research itself. This somewhat reflexive result again points towards some of the highly distinctive qualities of CALL. Frequently, those working in CALL do not simply transfer research methods or designs from cognate disciplines, or if they do, important adjustments are made while in transit. Sometimes the method or design in CALL is quite unique or distinctive. Thus, CALL research methods regularly draw from quantitative, qualitative, and mixed methods approaches and when employed, often very particular research designs are applied. Given that in CALL, technology is always implicated in some way, at some level its role needs to be understood and accommodated. Methods and results from neighboring disciplines may be tested anew or replicated in some way. The technology itself can be both the subject and the object in the sense that the CALL study can focus not only on the role that the technology plays in shaping the interaction or the output, but also on technology used as an instrument to measure or record that activity. Thus, increasingly in CALL research, we note the use of eye-tracking technologies, video capture, audio logs, and so forth. We are using technology itself to help us understand the role of technology in CALL — another example of reflexivity.

Moving to Psychology, Linguistics, and Technology, the results were somewhat surprising in the participant survey with the relatively low rankings associated with these three areas. Perhaps a higher ranking would be expected. And yet, for those who have been working in the area of CALL for a sustained period of time, perhaps these results are not that surprising after all. Though these reflections remain speculative, each domain has had its “difficulties” with CALL. The field of Psychology is potentially influential. As referenced in CALL, when it is used, it is typically employed as a source for theories of learning. These theories may range greatly from language learning specific theories to more general theories including those that purport to apply to online or computer-based learning in particular. Such perspectives may also involve a stance on individual cognitive functions and learner factors such as motivation and autonomy. That said, the value and the impact of such theories emanating from Psychology is perhaps tempered by the emphasis on practice by many in CALL. Similarly, Linguistics might be thought to be central to the development of CALL. However, again, perhaps the connection is more indirect. While Linguistics may be called upon in all kinds of ways in CALL from investigating the use of bilingual language dictionaries through to the analysis of language learner output in online interactions, the relationship is in many regards more at a distance. Last, of course, one would have thought that technology is absolutely fundamental to CALL. Well, it is and it is not. Inevitably, technology will be involved at some level — after all, the label, “computer” comes first in the acronym CALL. And yet, from its earliest days, those employing new technologies in language learning have been warned not to be technology-led. We believe this message has been well received and understood, at
least within the confines of our field. While all those in CALL have a keen interest in the technologies they employ — they could not “do” CALL without them — at the same time there is an understanding that CALL practitioners should remain watchful, and not get too carried away with the lure of a new or trendy technology. In spite of the excitement, the relationship with the technology itself is determinedly objective. This is actually a more critical issue than we might imagine. As the use of technology in language learning has gone more mainstream, teachers, developers, and even researchers increasingly present and publish with little or no awareness that there is a decades-long research base for their endeavors. There is a tendency to jump from digital bandwagon to digital bandwagon with eyes solely on the newest technology “affordances” rather than on what the extant CALL literature might do to ground their efforts. Increasing the emphasis on Pedagogy and Design within not only research but also development can help in tempering the impact of this still widespread view that raises the technology above all else.

Despite the lofty goals of this conference and the results of the discussions among the researchers gathered in Antwerp for it, we are keenly aware of the limitations of our enterprise. This group, though international and composed largely of experienced CALL researchers, cannot claim to be representative of the field. What would the results have been if this had been conducted at a CALICO, EUROCALL, or some other CALL conference? Or through an online survey? There were many voices, including those of a substantial number of those widely published and cited in our field, that were not heard. Second, as this was a research conference, we see the CALL field here arguably through the lens of the researcher. Other stakeholders who see themselves largely in the role of practitioners, developers, and methodologists — consumers of research — may have quite different views of what is important in defining the field.

Nevertheless, we contend that these results are important both for CALL research as a whole and for providing guidance to those new to the field. Here, we would like to make two points. First, we believe the focus on Pedagogy, Design, and Research is justified. These areas are fundamental to the identity and mission of the discipline we know as Computer Assisted Language Learning. This triumvirate highlights the importance of CALL practice, supported by research, the making of effective learning environments through technological means, and a commitment to rigorous evaluation and testing using the most sophisticated and effective research tools. Second, we believe these results, while just the outcome of a simple survey, help assert CALL’s independence from long-standing, cognate disciplines such as Psychology and Linguistics. Technology-mediated language learning is not the same as classroom-based, teacher-led, face-to-face learning. Technology makes a difference — our field explores and seeks to characterize coherently the nature of that difference for a range of objectives and contexts so that technology can be harnessed for more efficient, effective, and engaging language teaching and learning. Such considerations are worthy of further reflection as the field of CALL continues to grow and evolve into the future.

Speaking of the future, this alertness to the importance of Pedagogy and Design in the CALL activities we create fits well with our goals for the next CALL Conference in 2015 where our theme is “Task Design and CALL”. We hope you will be able to join us then in Tarragona, Spain.

References


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