

Evaluating Computer- Assisted Language Learning

An Integrated Approach to
Effectiveness Research in CALL

JONATHAN LEAKEY

Peter Lang

The need for systematic quality control in CALL

Introduction

New technologies, new literacies and a need to demonstrate their value

There have always been sceptics who have doubted whether the computer has anything significant to add to the language learning experience beyond the 'wow' factor. Even with the arrival of the modem, broadband, Local Area Networks (LAN), the worldwide web (WWW), Virtual Learning Environments (VLE) and e-learning, doubts have persisted and the absence of clear-cut empirical data demonstrating improved learning has not helped to quell the uncertainty. It is still not really known with any degree of certainty whether computer-assisted language learning (CALL) makes an objective, measurable and significant difference to students' learning.

Qualitative studies have been aplenty and these have lent some credence to the educational benefits of new technologies for language learning. The language teacher may now, by means of a computer, deliver the four main language skills (listening, speaking, reading and writing), teach vocabulary acquisition, grammar tuition, literature, area studies, and also enhance meta-cognitive language learning skills. Computer-mediated communication (CMC) and web-enhanced language learning (WELL) have sought to exploit the opportunities to motivate a new generation of language learners. Within educational institutions we also have ever-improving multimedia language laboratories, interactive whiteboards (IWBs), networked courseware and sophisticated tracking software. Nowadays, language learning can occur through mobile-assisted language learning (MALL), audio-, video- streaming, mp3s, pod-casting and wi-fi – literally,

language learning on the hoof. But can we show that any, or all, of these do any better than an inspirational and well-organized language teacher can achieve, or could have achieved in the past, without the benefit of a computer or digital lab, and using merely those tools of the pre-digital era: paper, pen, chalk (or dry-wipe marker!) and talk, conversation class, group/pair work, cassette recorder and an overhead projector?

The digital revolution has even altered the way language is used. Chapelle (2004) put it this way: 'language learners are entering a world in which their communicative competence will include electronic literacies, i.e., communication in registers associated with electronic communication' (2004: 2). But are the tools of educational measurement still flexible enough, and do they have the scope, to be able to evaluate and indeed measure the impact of this revolution on language learning and language learners? Indeed, is the task of identifying scientifically the causes of improvement in language learning an impossible one? Is it like trying to 'triangulate on the infinite (or whatever else we choose to call it) with our finite minds and tools', as Willard McCarty put it in his key-note speech to the 1995 EUROCALL Conference in Valencia?

The challenge for those attempting to apply scientific metrics to any Humanities subject – and CALL must surely belong, in large measure, to the Humanities – is that we are dealing with human beings, all of whom possess complex subjectivity, multiple motivations and unique experiences and gifts. Each one uses different learning processes, adopts different learner strategies, and demonstrates different learning styles. However, in evaluating pedagogy for language acquisition, there is not only the learner to factor in, but also the learning and the learning environment.

When one considers the learning, there are plenty of language-learning pedagogies past and present that may be influencing teachers and classroom or lab proceedings: Behaviourism, Functionalism, Constructivism, Social Constructivism, Associationism, Connectivism, Socio-linguistics, Chomskyism, the Natural Approach, Accelerative learning, Suggestopedia, Second Language Acquisition (SLA), Cognitivism, Task-Based Learning, Blended Learning (BL) and more. The question is the following: is the role they play identifiable, and if so, is it susceptible to qualitative appraisal or even quantitative measurement?

As for the CALL learning environment, clearly there are factors that must play their part in influencing learning outcomes, such as comfort, ergonomics and affective or psycholinguistic dynamics. Computer-based learning environments clearly create their own variables in the learning equation. Can these, too, be identified, isolated and measured? And if so, how?

In essence, this book is about evaluation and aims to give the reader, whatever his or her experience of evaluation, a theoretical introduction as well as practical tools (i.e. a model for evaluation and stage-by-stage checklists) for assessing the value of computers in language teaching and learning (CALL). This book will look at the history of attempts to be more certain in evaluating CALL and will explore ways in which evaluation might be done more efficiently and comprehensively. While the field-work has been carried out at a UK university level, examples are cited from other sectors of education from primary, through secondary and up to adult level. Readers will find the model for evaluation (abbreviated to MFE), and checklists have a built-in flexibility to enable them to be applied in a wide range of educational contexts. They will enable the evaluator to carry out a kind of 'quality control' of the key factors that contribute to computer-assisted language learning.

To that end, the focus has been on three variables which were felt at the outset of the study to encompass the principal factors influencing the language learner and language learning: the digital platform, the software program, and the pedagogy employed. It was concluded early on in the project that an evaluative model for CALL had to deploy the appropriate metric tools and research approach to assess empirically both the impact of each distinct element and any added synergies that may operate when all the elements are working together in a real-life setting.

The need for a systematic approach to CALL evaluation

This book builds on the agenda-setting work of a small number of CALL/CASLA researchers to develop a more systematic approach to evaluating CALL. From the outset the aim was to demonstrate that CALL

effectiveness research, drawing on the findings of empirical as well as more qualitative research, should also be an integral part in the design and construction of appropriate digital learning platforms, the writing of software for language learning, and the conceptualizing of effective pedagogies for CALL. That this has not always been the case may have been due to the fact that CALL evaluations have often been undertaken in a scattergun way and have not always employed a rigorous methodology. It is probable that there will never be a single optimal pedagogy given the plethora of existing approaches and language theories and their ever-changing nature. However, what is needed, the more so because of this diffuseness in the pedagogy and the hectic pace of technological advances, is a holistic, stable and reliable approach to CALL evaluation. There are, in the history of CALL and CAL, examples of good evaluative practice dating back to the earliest days of computer-assisted learning (i.e. the 1960s), which need to be integrated into a model for CALL evaluation.

The 'shabby equipment' may have improved, become less prone to breakdown and more interoperable, but has the pedagogy kept pace, and have the learners and teachers managed to keep up? Laurillard in 1994 sounded a note of caution: 'If the use of new technology were to begin with an analysis of what students need, instead of an analysis of what the technology can offer, the directions taken would be very different' (1994: 1). Similarly, Thompson states that CALL materials must be relevant to, and integrated into, the curriculum: 'Unless [CALL materials] are directed towards specific modules in specific programmes, which relate in a meaningful way to their general learning programme, learners will soon dismiss CALL as a waste of their time' (2005: 151). In recent years there seems to have been a gradual reappraisal of priorities with an increased emphasis on a learner-oriented approach. Yet the nagging question persists: does all this computer-assisted learning make any real difference to the learning process and to the quantity and quality of the learning? And, if so, how can this be proven?