Chapter XXXIII
Portable Handheld Language Learning:
From CALL, MALL to PALL

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ABSTRACT

This chapter explores aspects of portable handheld language learning that are likely to benefit many mobile assisted language learning (MALL) practitioners. Portable handheld language learning refers to mobile, virtual, and ubiquitous language learning mediated through mobile handheld devices. Currently, both computer assisted language learning (CALL) and MALL seem to dominate the act of language learning. Against this background the chapter first provides a brief review of CALL, highlighting CALL technologies helping mediate language learning. Second, it delineates features typifying e-Learning and contends that CALL is more closely linked to traditional e-Learning than MALL. Third, it provides empirical instances of MALL and argues that the future of language learning lies more with MALL and especially with pen assisted language learning (PALL) than with CALL. Finally, it maintains that an all-encompassing and multidimensional definition of mobile learning is necessary if MALL is to evolve into a mainstream virtual learning enterprise.

CALL: WHAT IT IS AND ITS BRIEF HISTORY

In one sense, CALL is an approach to language learning and teaching that uses the computer as an aid to presenting, reinforcing, and assessing the material to be learned. In another sense, it is a catch-all term referring to the use and study of computer applications in language learning and teaching. It is an expression that was coined at the 1983 TESOL convention. However, as an enterprise, it dates back to the 1960s, even though...
it gained currency in the 1980s, supplanting the then much-vaunted approach, computer assisted language instruction (CALI). In the late 1980s, an alternative term, technology enhanced language learning (TELL), which was thought to precisely embody the activities that mostly fall within the scope of CALL, emerged. However, its usage was short-lived, and to date, CALL is still a vogue term as it appears to have gained an upper hand over TELL (Davies & Walker, 1999-2007; Warschauer, 1996).

**CALL TECHNOLOGIES AND LANGUAGE LEARNING**

CALL technologies (programs, applications, and platforms) are central to how language learning is mediated in CALL environments. Most of these technologies are determined largely by language learning approaches and methods and their attendant pedagogical and theoretical philosophies. That is, they tend to reflect the prevailing philosophies and the dominant pedagogical and learning paradigms determining how language learning ought to be mediated. However, these technologies also tend to shape and influence pedagogical and learning paradigms (Kern & Warschauer, 2000). Against this backdrop, this section of the chapter outlines some of the CALL technologies and the way in which they facilitate language learning. Modeled on the typology of CALL programs, applications, and platforms delineated by Warschauer (1996) and Kern & Warschauer (2000), these technologies are categorized into three divisions: mainframe computer technologies; PC technologies; and multimedia networked computer technologies.

**Mainframe Computer Technologies**

These are the first-generation CALL technologies related to the mainframe computer informed by the behaviorist approach to CALL—the view that language learning and acquisition entailed repetitive habit formation patterns. Most of them (e.g., the audio language laboratory and the PLATO system) viewed the computer as a tutor/taskmaster mediating language learning between the learner and materials. Some of the software programs they used included drill and practice programs, grammar and tutorial programs, and language testing instruments. One prominent feature of these programs was the provision of immediate positive and negative feedback to learners on the structural accuracy of their responses (Davies & Walker, 1999-2007; Kern & Warschauer, 2000; Warschauer, 1996).

According to these mainframe computer technologies, language learning is mediated through:

- Repetitive drilling of the same material (e.g., grammar, vocabulary, spelling)
- Pronunciation and reading activities
- Constant error analysis
- Listening to audio recordings of the target speech
- Reading, speaking, and writing

Some of the drill programs included, among other things, the following: *Advanced Grammar Series; Accelerated English; Firsthand Access; Reading Adventure 1 – ESL; Gapmaster; English Vocabulary; Typing Tutor; and Testmaster* (Davies & Walker, 1999-2007; Warschauer, 1996; Warschauer & Healy, 1998).

**PC Technologies**

These constitute the second-generation CALL technologies. Driven primarily by cognitivist/constructivist approach to language learning and teaching, these CALL technologies view the computer from a blended perspective as both a tutor and a pupil on the one hand; and as both stimulus and toolkit on the other hand. Fundamental to these technologies are three principles: learners