

# State of the Art: The Effectiveness of CALL

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この短いレポートは CALL (Computer Assisted Language Learning) の有用性に関するものである。一般に、この領域での研究はまだ不足しているが、動機づけ・リーディング・リスニングの三つの分野に関しては、最近色々な研究結果や実践報告が出されている。ここでは、それらについて検討し、報告する。

A lot of money is spent on Computer Assisted Language Learning (CALL). But is it an effective use of money? Do multitudes of hardware and software really help students improve their foreign language abilities?

The answers to these questions seem to be "yes," yet very little research has actually tried to measure the benefits of various CALL activities. The main reason for the lack of findings is that research design and controls are very complicated. Researchers need to account for learner backgrounds and goals, teacher abilities and expectations, and measurement techniques, to name just a few variables. There has also been a lack of research simply because the field of CALL is so new.

In any case, let us briefly look at recent CALL research and activities with respect to three areas of foreign language acquisition: motivation, writing, and listening.

1) **Motivation.** Students see computers and Internet as a key to both their personal futures and life beyond Japan. They can easily find foreign keypals through a number of agencies on the Internet. E-mail has been shown to be highly motivating and to promote intercultural awareness (Ruhe, 1998).

The exact benefits of Internet are hard to measure, but it is undoubtedly true that Internet motivates students to attain some foreign language acquisition goals. For example, one can improve his or her business German (Roche, 1999) or business English (Vallance, 1998) using the Internet. Also, courses which simultaneously teach both a foreign language and another academic subject can successfully integrate Internet activities into lesson plans (Isbell & Reinhardt, 1999). Most web sites for second language learning are designed to meet the needs of intermediate level learners (Peterson, 1998).

Still, computer hardware and software can be obstacles to motivation and learning. Instructors often end up teaching about computers instead of teaching the foreign language. And, administrators should be aware that there is a lot of low-quality software on the market, so CD-ROMs need to be ordered with care (Murray & Barnes, 1998). Fortunately for learners, a lack of prior computer experience does not seem to adversely affect test results on the computer-based Test of English as a Foreign Language (TOEFL) (Taylor et al., 1999).

2) **Writing.** Computers can be used to aid foreign language writing ability in at least five ways. a) Students have the ability to rearrange and rewrite text on standard word-processing programs. These programs contain spelling, punctuation, and grammar checkers which aid students. b) There are electronic dictionaries, encyclopedias, and translation programs. c) E-mail writing can be used successfully at language ability levels ranging from junior high school (Pattimore, 1999) through university (Liaw, 1998). d) Numerous Internet sites try to assist non-native speakers with their writing abilities. For example, Purdue University's On-line Writing Lab is comprehensive. And, e) The use of Local Area Network (LAN) software allows real-time conferencing so that students and teachers can display their essays and exchange ideas with each other in a kind of closed-network, "chat" format. Many studies show that students write a lot during LAN-based classes (for example, see Skinner & Austin, 1999; Braine, 1997; Sullivan, 1993).

Yet, some findings do question the ability of computers to aid student foreign language writing. A review of the literature indicates that computers per se do not significantly improve the quality of writing without the presence of appropriate writing instruction (Iwai, 1999). Also, several studies show that traditional classrooms are as good as, if not superior to, LAN formats because, in traditional classrooms, students can give better feedback on each other's work (Braine & Yorozu, 1998), and teachers are better able to teach grammar and give error correction (Ghaleb, 1993). Another important factor which harms the efficacy of computers in writing classes is that most students have poor keyboarding abilities.

3) **Listening.** Countless studies show that individual listening tasks in classrooms can benefit learners, but almost no research has been done with respect to CALL facilities. Despite this, various software purports to improve listening ability, and Web sites such as "Lingua Center" at the University of Illinois offer comprehensive foreign language listening activities.

Most CALL rooms also contain related multimedia facilities such as satellite TV, and video and audio tapes. It is clear that most students enjoy studying English by watching videos. They also enjoy and benefit from broadcast materials such as NHK language programs which are available in multimedia rooms (Umino, 1999). However, the relationship between CALL and listening awaits applied linguistic studies.

**Conclusion:** This report has briefly shown some of the benefits and problems associated with CALL. Of course, there are many other areas of CALL which are not addressed here, such as speaking fluency, pronunciation practice, vocabulary acquisition, and reading. A small amount of research has been done in those areas.

CALL is a new field of study. Almost all applied linguistics research in CALL is less than 10 years old. Amazingly, influential applied linguistics journals such as *Language Learning* and *TESOL Quarterly* have published very little on the effects of CALL. Undoubtedly, an important mission which language teachers will undertake in the years to come will be measuring the benefits of various CALL-related tasks.

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