



LINGUISTICS DEPARTMENT - STANFORD UNIVERSITY

An Invitation to CALL

Foundations of Computer-Assisted Language Learning

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Unit 5: CALL and Language Skills

OVERVIEW

Skills-oriented language teaching remains a common approach for classes as well as for self-learning, and computer-assisted language learning is no exception. In this unit, we look at how both tool and tutor software can be used to support specific skills. In particular, we will look at some websites that focus on these skill areas. Many of these are for free, but like everything else that's free on the web, the sites need to be looked at carefully for their pedagogical value. Once you understand what they do, try to judge their fit to your potential students and your own teaching approach. You can also use them to get ideas for your own future CALL materials development. The questions you should be trying to answer are the following:

1. What have teachers/developers done to teach the skill areas using computers?
2. To what extent does what they've done actually enhance learning?
3. And most important, how can you use these resources to support your students' learning objectives?

A good set of links for *all* skills can be found at the Ohio Program of Intensive English site: www.ohiou.edu/esl/english/. Also, there are online language proficiency tests available, such as those by [World English: http://www.world-english.org/english_test.htm](http://www.world-english.org/english_test.htm).

ESL PORTALS

Because of the enormous number of English teachers and learners, there are quite a few multi-skill collections for ESL. A few, such as www.manythings.org by the Kelly brothers (<http://aitech.ac.jp/~lkelly/> and <http://aitech.ac.jp/~ckelly/>) are mostly labors of love for students and colleagues around the world; often, however, these are commercial, aimed at getting "eyeballs" for advertisers. Some of these are divided by skills and have examples of web-based

materials: see for example www.eslgold.com or <http://esl.about.com> or just type "ESL" plus the skill you're interested in into Google. Collections for other commonly taught languages can be found in a similar way. One type of collection is a portal, which is a website that has a large number of links to other websites, such as www.rong-chang.com.

LISTENING

Listening is potentially one of the most promising areas for CALL development. This is because multimedia computing has everything standard audio and video have with the addition of a variety of meaning technologies such as text support, hyperlinked glossaries, and even translations. Listening activities typically involve presentations followed by comprehension questions--some also include full or partial dictations. One type of presentation specific to CALL is the *punctuated* presentation, in which the flow is interrupted at intervals to ask questions along the way. This in theory encourages more focused attention and allows a learner to get a check on understanding early in the activity. This technique was popularized in products by [DynEd](#) beginning around 1990. Surprisingly few multimedia programs have followed their example.

Examples of course website for two of my recent listening classes are at www.stanford.edu/~efs/693a/ and www.stanford.edu/~efs/efs693b/. The notes have both links and examples of listening assignments. An overview of listening on the web from a 2003 TESOL colloquium is available at www.stanford.edu/~efs/tesol03listening. Note that the list there includes a number of sites where you can find authentic audio or video materials supported by text. A good one for English for academic purposes is [Uncommon Knowledge](#), featuring interviews and panel discussions with public policy experts (note: only the ones before 2006 have the text).

There are a number of useful dedicated ESL listening sites: three of my favorites are www.esl-lab.com, www.ello.org, and www.lingual.net.

SPEAKING

In terms of *direct* practice of speaking, recent developments on the web have allowed for voice chat sites which make it possible for learners and teachers to interact through the Internet in distance education courses. Asynchronous speaking practice is possible through www.wimba.com, using Internet voice mail, or simply attaching sound files to email. There has also been interest recently in having students produce and publish podcasts. Many believe that putting students in front of a computer in groups of two or more will get them talking about the computer task and improve speaking fluency, although research has not always borne this out: like many other CALL activities, it depends on the students' readiness and motivation. For tutorial CALL, practicing speaking has always been tricky. Auralog's [TellMeMore](#), www.auralog.com is an example of a program which allow some limited conversation simulation that gives something of the experience through the use of speech recognition software. Most programs simply rely on voice recording, with the learner simply recording a line from a dialogue and then comparing it with the native sample.

It has been suggested by many practitioners that using text-based chat supports the development of speaking skills indirectly due to the synchronous and informal nature of chat. The most widely used indirect method for practicing speaking is simply to listen to conversational dialogues on disk or the web. See, for example, www.focusenglish.com/dialogues/conversation.html.

READING

In the early days of CALL, reading software was designed to improve skills in order to transfer them to paper materials. More recently, reading in digital form is becoming more and more common.

Most CALL reading instruction, first on disk and later on the web, has involved the use of meaning technologies. These include dedicated applications, such as hypertext glossaries, translations, and notes (on grammar, usage, culture), put together by developers for particular texts and generic applications such as electronic dictionaries, encyclopedias, translation systems like Google's <http://translate.google.com/#>. A number of studies have shown an advantage for comprehension and vocabulary acquisition when reading materials are supported by multimedia glossaries, and both native speaker and language learner texts exist with voice enhancement (text to speech) texts and dynamically illustrated material.

Here are some other ways CALL can be used to support reading

- Just using the web: teachers give students tasks that require finding, comprehending and sometimes consolidating information on the web.
- Educational sites with ESL or adult literacy support: See the Learning Resources Adult Education [Reading Site](http://literacyworks.org/learningresources/), <http://literacyworks.org/learningresources/>.
- Text reconstruction activities, such as Storyboard, [cloze exercises](http://eslus.com/LESSONS/READING/READ.HTM) (<http://eslus.com/LESSONS/READING/READ.HTM>), and jigsaw readings
- Timed or paced readings to develop [speed](http://www.readingsoft.com/), for example, www.readingsoft.com/.
- Multimedia reading, such as voice enhanced texts and dynamically illustrated material, found especially on CD-ROMs
- Student-produced material, such as the set of children's stories written by high school Spanish students at www.northstar.k12.ak.us/schools/nph/historias/.
- Online graded readers such as those at www.esreading.org/.

WRITING

Writing was revolutionized for everyone with word processing, and the addition of spell checkers has been quite helpful. Grammar and style checkers are much less useful to date, and using a thesaurus can be counterproductive if students aren't trained in their limitations. Writing has also been a common skill taught as a course through distance education using the Internet.

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Some other ways computers enhance writing instruction include the following.

- Use of email and discussion boards (see [Unit 3](#)) for fluency development.
- [Online writing resources](#) such as <http://owl.english.purdue.edu/handouts/esl/index.html> and tutorials, like www.monash.edu.au/lls/llonline/writing/index.xml
- Blank screen (where the monitor is turned off and students type in their ideas without being distracted) and other production techniques, such as using graphic organizers or concept mapping: <http://library.usu.edu/instruct/tutorials/cm/CMinstruction1.htm>.
- Collaborative writing tasks. These are made easier today with tools such as an online word processor now available for free from Google: <http://docs.google.com/>
- Writing support practice (e.g., CALL activities with fill-ins for structured writing)
- Publication opportunities (both paper and web) as motivators. See Tom Robb's classic description of an early web publishing project at www.cc.kyoto-su.ac.jp/~trobb/projects.html.

With respect to the last point, writing publication opportunities are readily available through Wikis and Blogs. Wikis are webpages that can be easily modified by multiple users (see, for example, Wikipedia: www.wikipedia.org) and are particularly good for collaborative projects, while blogs (weblogs) are online journals that individual students or groups can publish and allow others to leave comments on: see www.teachingenglish.org.uk/think/resources/blogging.shtml.

GRAMMAR

Grammar practice was perhaps the earliest use of CALL. Today grammar work is largely focused on the following:

- Workbook-style exercises (on disk and online): online examples can be seen at www.grammar-quizzes.com/.
- Grammar test prep materials (especially TOEFL www.toefl.com and TOEIC <http://www.toEIC.com>)
- CD-ROMs accompanying grammar textbooks, like [Focus on Grammar](#) at www.pearsonlongman.com/ae/multimedia/programs/fog.htm and [Azar's](#) grammar series www.azargrammar.com/materials/index.html.
- Online courses and references (e.g., Anthony Hughes' [Online English Grammar](#), <http://www.edunet.com/english/grammar/index.cfm> or www.scribd.com/doc/2586846/Anthony-Hughes-the-online-english-grammar)
- Hypertext-linked grammar notes accompanying readings
- Grammar portals such as www.esltower.com/

PRONUNCIATION

Pronunciation work is generally of three types.

- Listen, repeat/record, and compare. This option shows up in many multimedia programs and is analogous to the tape-based language lab technique in the audio-lingual method. However, the instantaneous response of digitized speech (no rewinding needed) makes

the computer a more effective instrument for this. See <http://international.ouc.bc.ca/pronunciation/dialog01.htm>

- Visualization: wave form, pitch contour, spectrogram. The first and last are of questionable value. Wave forms are easy for a computer to produce, but they only clearly show the bands of intensity across time. This is most helpful in teaching rhythm. Spectrograms are most useful if they have high detail, which they generally don't on CALL software, and they require training in phonetics to interpret them. However, visualization of pitch contour has been found to be quite helpful for some students in recognizing and producing both the patterns and ranges of intonation.
- ASR (automatic speech recognition) scoring. Here, the computer uses speech recognition software to grade accuracy. This can be useful, but there are a lot of technical problems--microphone quality, sound card quality, and background noise are all variables that can negatively affect the score, leading even native speakers to score as non-natives. For an example of a standardized test that uses ASR, see Ordinate's PhonePass: www.ordinate.com. ASR and other is also used in [Rosetta Stone](http://www.rosettastone.com), <http://www.rosettastone.com>.

In fact, the Rosetta Stone site (www.rosettastone.com) provides a good opportunity to explore all three types of pronunciation support, currently in their demo of Turkish. The sample lessons allow you to see intonation tracking as well as get a machine score of the closeness of your pronunciation to a native norm. It should be noted, however, that this scoring is not the same as a native speaker would give: sometimes a native speaker will even be marked low. There is a problem sometimes with the quality of the microphone, environmental noise, electronic or mechanical noise from the computer, and input settings for the microphone that can all effect the accuracy of speech recognition.

There are a number of commercial CD-ROMs for teaching pronunciation. These are generally superior to the text and tape alternatives. An example is [Pronunciation in American English](http://www.amenglish.com/products/Pronunciation.cfm), www.amenglish.com/products/Pronunciation.cfm. There are also some useful sites with pronunciation support: one example is <http://international.ouc.bc.ca/pronunciation/>.

VOCABULARY

Vocabulary activities have been around since the early days of CALL in the form of electronic flashcards (linking L2 word to L1 translation or L2 word to L2 definition). Other common CALL implementations for vocabulary include the following.

- Hypertext dictionaries/glossaries. [Babylon](http://www.babylon.com) (www.babylon.com) is a commercial memory-resident dictionary system that runs in the background on your computer; www.vocabulary.com is a web application that automatically links items in a web page to a variety of dictionaries.
- Talking dictionaries: Longman, Oxford, and Newbury House have learner's dictionaries with CD-ROMs that include pronunciation and sometimes other multimedia support. An online version is at www.ldoceonline.com.

- Concordance programs: these programs look for words in collections of texts, or corpora, and return examples of the word in the immediate context it occurs in: an online one is available at www.edict.com.hk/concordance/.
- Picture dictionaries: <http://www.pdictionary.com/> has a picture dictionary for English, Spanish, French, German, and Italian. Of course the largest "picture dictionary" in the world is at <http://images.google.com>. Try alizarin, fennec and axolotl if you don't know what they mean (or even if you do)
- Word lists and vocabulary tests for English: [General service list](#), <http://jbauman.com/gsl.html>; [Academic word list](#), www.victoria.ac.nz/lals/staff/averil-coxhead/awl/; [Level tests](#), www.er.uqam.ca/nobel/r21270/levels/.

An outstanding site for vocabulary teaching and research tools is Tom Cobb's Compleat Lexical Tutor: <http://www.lextutor.ca/>

CULTURE

Obviously, this is a huge area for foreign language teaching, where authentic cultural material is readily accessible through the web. There are many ways to use the authentic material found on websites to support cultural learning. YouTube, <http://www.youtube.com>, is a particularly useful application for this purpose with intermediate and advanced students, see <http://eduwithtechn.wordpress.com/2007/08/18/teach-culture-through-youtube-your-students-do-it/>. Links specifically for teaching culture can be found at <http://iteslj.org/links/ESL/Culture/>. To review a proposed pedagogical framework for culture and technologies, see Levy (2007) at <http://llt.msu.edu/vol11num2/pdf/levy.pdf>.

PRACTICE ACTIVITY

Select *one* skill area that particularly interests you. After reviewing some of the sources mentioned above, find several *other* web sources on your own and review them for their potential to integrate into or supplement your class activities.